

SECTION C-5
SPECIFIC TASKS – B&G

CHAPTER 2
OPERATIONS

5.1. OPERATIONS

This area encompasses those functions that impact directly or indirectly on ground, flying and ordnance delivery scoring operations in accordance with AFI 13-212, as supplemented. Laser operations and night vision goggles may be in operation by full performance start date.

5.1.1. TOWER OPERATIONS

Towers shall be manned and the contractor shall ensure operational readiness of all required range targets, scoring/plotting equipment, communications, and support systems not later than 30 minutes prior to any scheduled range period. Any malfunctions or discrepancies shall be corrected to ensure range operational capability prior to the scheduled range period. Prior to the first scheduled range period, contractor personnel shall prepare target areas as required by the flying schedule.

5.1.2. STRAFE PITS

The contractor shall ensure strafe pits have 12 inches of loose, sandy soil and the surface cleared of spent projectiles, rocks 3 inches in diameter or larger, and any other hazardous debris. The latter shall be accomplished by hand-policing earthen surfaces in the area 50 feet either side of centerline, 75 feet in front of and 100 feet behind each strafe target panel. The RCO or designated contractor representative shall inspect the impact area(s) immediately after hand-policing before the first mission each day to ensure compliance.

5.1.2.1. SCORING SYSTEM INSPECTION

The contractor shall inspect strafe panels and install acoustiscore transducers after checkout on the DAT-1 Test Set, and conduct the clipboard check. The contractor is responsible for weekly calibration of the DA3H using the AAMDI Test Set calibrator. Panels shall be erected prior to first strafe mission.

5.1.3. NIGHT LIGHTING

The contractor shall prepare and activate night lighting as required for night range periods.

5.1.4. TOWER COMMUNICATIONS

The contractor shall position a hand-held radio in the main and flank tower whenever flank tower operations are required. The radios shall be used to control personnel and work crews operating on the range complex. They shall also serve as back-up communications in the event of tower intercom failure. In the event of total communication failure, comm-out operations will go into effect where applicable.

5.1.5. SCORING SYSTEMS OPERATION

The contractor shall check scoring systems for proper operation. Contractor personnel must be trained and qualified in Air Force approved scoring systems. Every effort shall be made to spot dusters (no smoke impacts). However, if either spotter fails to spot a duster, it shall be called a "No Spot," and no score shall be given. Impact data shall be relayed for scoring. Tower personnel shall not, at anytime, attempt to give a coordinate that is not verified by accurate score reading. Any hedging or recording of false scores is prohibited and there shall be no deviation from this policy. Strafe targets shall be scored by acoustiscore. All scores shall be recorded and reported to the RCO for relay to aircrews via radio. Scores will be passed to the appropriate local flying squadron via fax or other acceptable means upon mission completion. Scores shall be maintained/archived for at least three years. The data shall be in a Microsoft Access database and shall include, as a minimum:

- Event
- Event parameters (airspeed/altitude/dive angle, and other key parameters)
- Score (Distance/Clock) and identification as to whether it is in feet or meters
- Estimated score for any No Spot/Unscorable bomb that was seen from any tower.
- Any information available on Gross Error bombs that might indicate the reason for the Gross Error. This could include aircrew debriefing comments, or just RCO observations.

5.1.6. RANGE CONTROL OFFICER

The contractor shall provide qualified RCOs to control Class A Range Operations IAW Appendix 1 to this PWS Chapter.

5.1.7. WATCH FOR THE UNUSUAL

Contractor personnel shall be continually watchful of the range areas. Immediately report to the RCO any signs of unusual activities.

5.1.8. ORDNANCE RELEASED OFF THE RANGE.

Contractor personnel shall immediately notify the ROO in the event of any ordnance release off the range and/or fires on the range. Every effort will be made to accurately plot the location in either event. The RCO shall notify the Command Post and QAE of the location (as accurately as possible), time of the incident, squadron, call sign, crew number, aircraft tail number, and the bombing event.

5.1.9. BIRD AVOIDANCE STRIKE HAZARD (BASH)

The contractor shall operate in accordance with the local base BASH Plan and will notify all aircraft upon range entry of any hazardous bird activity.

5.1.10. ACCIDENT RESPONSE

The contractor shall respond to an aircraft or motor vehicle accident IAW local range checklist procedures.

5.2. MAINTENANCE

The broad functions apply to the entire range complex and include buildings, facilities, grounds, target areas, scoring systems, and communications equipment. The contractor shall perform all preventive maintenance inspections as required by applicable Air Force Technical Orders or as specified in the Quality Control Program Plan to provide maximum service life and peak

operational capability at all times. When performed on an unscheduled basis, work will be performed so as to minimize downtime and loss of range availability for flying training.

5.2.1. TARGET MAINTENANCE AND CONSTRUCTION

The contractor shall perform two types of target maintenance and construction: (1) scheduled, which is accomplished on a periodic recurring basis such as discing and hand policing of strafing pits, and (2) unscheduled, which provides short notice repair to unacceptable damage such as changing of a strafe panel which has been shot down. Regular contractor target area inspections will facilitate early identification for unscheduled maintenance requirements. Scheduled maintenance and construction may include changing target configuration and location. All target areas as outlined in AFI 13-212 (local supplement) are affected. See Tech Exhibit 003.

5.2.1.1. TARGET MAINTENANCE

The contractor shall maintain targets in accordance with local annexes.

5.2.1.2. GOVERNMENT FURNISHED TARGET MATERIALS

The contractor shall provide the QAE 60 days written notice of requirements for Government Furnished Target Materials. Items listed in Technical Exhibit 5.

5.2.1.2.1. Target Vehicles

The contractor shall move all target vehicles from the salvage storage area to the designated target complex, and maintain a target vehicle log of government-furnished target vehicles and those awaiting target use. The contractor shall paint ID listing number on each vehicle drawn from DRMO. Starting sequence number for this contract will be determined locally. The contractor shall provide updates when significant changes are made, or semiannually. The log shall contain the following: ID number, type vehicle, date drawn, status, disposition, document number, serial number/stock number. A complete audit trail shall be maintained. The contractor will be provided a current Target Vehicle Log on contract start date.

5.2.1.2.2.

The contractor shall move all target vehicles from any DRMO or similar facility within a radius of 250 nautical miles of the designated target storage area (See Technical Exhibit 2).

5.2.1.2.3. Target Vehicle Maintenance

The contractor shall render salvaged target vehicles "soft" by removing engines and transmissions. The vehicle will also be despecularized before the vehicles are used in the range target areas. The contractor shall drain all fluids from the vehicles and remove hazardous material. The contractor shall remove radium dials, and other radioactive components. The contractor shall turn in all salvageable removed components, parts, and fluids to DRMO or CEV, if applicable.

5.2.1.3. SCORING SYSTEM MAINTENANCE

5.2.2. RANGE DECONTAMINATION AND CLEARANCE

The objective is to clear the target areas of all TAS, TAD, and TAR/OR. The contractor shall decontaminate/despecularize the ranges in accordance with individual annexes and IAW AFI 13-212.

5.2.2.1. SOLID WASTE DISPOSAL

The contractor shall move and process all QAE approved TAS, TAD, and TAR /OR to the on-range holding site after being identified or rendered safe by EOD.

5.2.2.2.

The contractor shall de-militarize all target vehicles and munition items prior to removal from the range holding site. The contractor shall validate and certify that the demilitarization has been performed IAW DoD Manual 4160.21-M-1. Subscale munitions equipped with spotting charges will be shredded or crushed to a size not greater than four inches square prior to range removal.

5.2.2.3.

The contractor shall remove all designated TAS, TAD, and TAR/OR from the range holding site after the completion of the annual range clearance operation and dispose of IAW federal, state and local environmental laws. The contractor shall not remove TAS, TAD, and TAR/OR until it has been certified and validated by EOD as free of energetic material IAW DoD Manual 4160.21-M-1. In addition, the contractor shall ensure the holding area is clear of all TAS, TAD, and TAR/OR by the end of the contract. Any scrap value of this TAS, TAD, and TAR/OR shall be credited to the Government.

5.2.3. REAL PROPERTY /FACILITY MAINTENANCE

The contractor shall provide all maintenance for the repair of all Government Furnished Facilities as listed in Technical Exhibit 5 IAW Industry Standards. Repair shall include, but is not limited to, all building fixtures, doors, windows, plumbing, sewage systems, heating, cooling, electrical power products, electrical lighting, concrete surface, fences, gates, signs and roads. Repair will not exceed \$500 without prior technical coordination from the QAE. Reimbursable material expenditures over \$2,500 shall have prior approval from the CO. Refer to individual annexes for roads, pavements, firebreaks, and grounds maintenance.

5.2.4. HOUSEKEEPING SERVICES

The contractor shall furnish housekeeping services for range facilities as specified in each range's Housekeeping Frequency Chart in Technical Exhibit 2. The contractor shall furnish all equipment and supplies necessary to perform these services. Immediately after each use, the contractor shall properly store all equipment and supplies. The housekeeping cleaning chart is intended to produce an acceptable level of performance. However, weather, traffic, or other conditions may demand additional cleaning beyond that scheduled by the contractor to ensure that facilities are clean, neat, and sanitary.

5.2.5. COMMUNICATIONS/ELECTRONICS

The contractor shall operate and maintain government furnished communications instrumentation and equipment listed in Technical Exhibit 5).

5.3. ENVIRONMENTAL

The contractor shall comply with and implement the host base Environmental Management Program.

5.4. ADMINISTRATION

The contractor shall provide all administrative functions necessary to satisfy range administration requirements to include preparing and maintaining correspondence, reports, logs

and other miscellaneous paperwork. The contractor shall maintain an information and safety bulletin board and establish and maintain files of all correspondence, reports, and inspections. The contractor shall maintain liaison and coordinate, as necessary, with host base scheduling to ensure proper operational and functional scheduling interface between USAF and other range users' mission requirements (this includes airspace utilization, and changes to weekly/daily schedules). The contractor shall also assist in the development of a range maintenance/clearance schedule as required.

5.5. LOGISTICS

5.5.1. PARTS PROCUREMENT FOR CAPITAL EQUIPMENT MAINTENANCE

The contractor shall provide all maintenance for the repair of all Government Furnished Capital Equipment listed in Technical Exhibits 5. The contractor shall follow host base supply procedures and regulations or instructions when requesting parts. All backordered parts shall be reconciled monthly. The contractor shall use the Air Force supply system to procure all Nationally Stock Numbered (NSN) items required in support of this contract. If the Air Force supply system is unable to meet mission needs, the contractor shall obtain the item through appropriate contractor procurement channels and the local purchase CLIN. Local purchase part procurements over \$2,500 require QAE technical coordination. Purchases over \$10,000 require CO approval.

5.6. AIRFIELD OPERATIONS

Reference individual annexes.

5.7. DISASTER PREPAREDNESS AND PLANNING

Reference individual annexes.

5.8. TELEVISION OPTICAL SCORING SYSTEM (TOSS)

The contractor shall perform O, M, & S on the TOSS system (where installed) IAW Appendix 2 to this PWS chapter.

AVON PARK AIR FORCE RANGE ANNEX

SECTION C-1

1.2. CONTRACTOR PERSONNEL

1.2.5. EMPLOYEE SECURITY REQUIREMENTS

1.2.5.1. All contractor personnel shall register their privately owned vehicles with the 6 Air Base Wing (ABW) Security Police Squadron, MacDill Air Force Base.

1.2.5.2. The contractor shall obtain at least a Secret Security Clearance for each employee working under the contract. The contractor shall apply for security clearances within 30 days after award of the contract in accordance with (IAW) Air Force Instruction (AFI) 31-601.

1.2.5.3. The contractor shall report all incidents of theft and vandalism to the Range Resource Manager and civil authorities.

1.2.6. EMPLOYEE TRAINING

1.2.6.1. The contractor shall establish and maintain an ongoing training program to ensure all employees assigned are current in their job knowledge. This program shall include, as a minimum, generator operations, familiarization with the contents and use of survival kits, crash and emergency procedures and hazards associated with aircraft accident sites, aircraft fires and procedures for first aid of injured personnel. The Resource Protection, with the concurrence of APAFR Disaster Preparedness personnel, shall determine the required contents of the survival kits.

1.2.6.2. When government assistance for specialized training is necessary, forward a request for training assistance to OL A, Det 1, 347OG/ROO.

1.2.6.3. The contractor Chief RCO will train and certify any government employee identified by the QAE as needing RCO training. Qualified individuals training records will be maintained with the contractor training records or as designated by the QAE.

1.5. PHYSICAL SECURITY

1.5.1.1. Contractor maintenance personnel shall ensure all gates, fences, barriers and ditching is maintained on Charlie/Echo and Bravo/Foxtrot Ranges to deter unauthorized personnel from gaining entrance. All discrepancies shall be reported to the QAE.

1.6. HOURS OF OPERATION

1.6.1. NORMAL HOURS OF OPERATION

The contractor shall be required to provide range and airfield operations from 0730 until 2300 during each weekday. The contractor will be required to work outside of these hours, both on weekdays and weekends, on an as required basis.

1.6.2. OUTSIDE NORMAL HOURS OF OPERATION

Overtime hours are not expected to exceed 150 operational hours on the range and 50 operational hours on the airfield per year.

SECTION C-4

4.1 DRINKING WATER

The contractor shall provide all water cooler dispensing equipment and potable drinking water.

4.2 POL

The contractor shall provide all fuels, lubricants, oil, and grease for contract owned vehicles, power tools and government- furnished equipment.

4.3 TARGET BUILDING MATERIALS

The contractor shall provide all target building materials to include, but not be limited to, lumber, paint, nails, plywood, and telephone poles, required to perform range target maintenance and construction functions outlined in C-5.

4.4. PROPANE

The contractor shall provide all propane fuel for illumination of IR targets and conventional bombing circles. The contractor shall also provide propane gas for nighttime scoring assistance.

4.5. PERSONNEL SAFETY EQUIPMENT

The contractor shall provide all personnel safety equipment (except those listed in Technical Exhibit 5) to include, but not be limited to, hard hats, safety glasses, and ear protectors.

SECTION C-5

5.1. OPERATIONS

5.1.4. TOWER COMMUNICATIONS

5.1.4.1. Contractor personnel shall readily know and use the radio frequencies associated with the range to pass scores to aircrews using the tactical range when no Range Control Officer (RCO) is present.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall disc each strafe impact area (350 x 200 ft) weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a beachcomber to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the targets to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks, 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling.

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acousticscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. When in the ground the strafe polls (telephone poles) will extend 30 feet above ground level with the poles leaning back at a 10-degree angle. (See Technical Exhibit 3)

5.2.1.1.6. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.7. The contractor shall maintain the 2 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 2,000 feet long and 12-18 feet wide. The lines shall be graded at least semiannually to remove vegetation and debris.

5.2.1.1.8. The contractor shall maintain the 2 foul lines on either side of the main tower (See Technical Exhibit 3). Each foul line is approximately 12 feet wide and extends to the flank towers. The foul line is defined by the roadway between the main and flank towers.

5.2.1.1.9. The contractor shall build and paint strafe panels as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.3. REAL PROPERTY AND CAPITAL EQUIPMENT MAINTENANCE

5.2.3.1. The contractor shall perform grass cutting out to 200 foot from all buildings on Charlie Range and around the control tower at the airfield.

5.4. ADMINISTRATION

5.4.1. SCHEDULES

5.4.1.1. The contractor shall construct and distribute a weekly activity schedule of contractor's design, NLT 0800 each Tuesday during the range operations scheduling meeting. The schedule shall reflect current range and airfield status, closures, laser missions, special operations and classified missions.

5.4.1.2. The contractor shall construct, print and distribute the daily Range Schedule NLT 1600, Monday through Thursday for the next day and NLT 1500 Friday for Saturday through Monday.

5.4.1.3. The contractor will receive one copy of the Weekly Flying Schedule from MacDill Airspace Management Office each Wednesday.

5.4.1.6. The program manager shall attend the weekly operations scheduling meeting and shall be prepared to brief range activities, limits, safety and security lock-downs, special operations and ground activities for planning purposes.

5.4.1.7. Contractor personnel shall consolidate range usage information on daily schedule and file for recording in monthly activity report.

5.4.2. EVENTS LOGS

At the start of each operational day, the contractor shall open an Events Log for each opened facility. All entries shall be preceded by the time of entry and followed by the operating initials of the person logging the information. Logs shall be kept a minimum of 90 days. The log shall be contractor-designed, but will contain as a minimum, but are not limited to the following: The date, opening/closing times, signature of individual completing facility checklist, range violations, equipment outages, in-flight emergency (IFE) and ground emergency, airfield information, any other information pertinent to the operation of the range or airfield, weather warnings or alerts, branch of service using the range period, type and amount of ordnance and on which range.

5.6. AIRFIELD OPERATIONS

5.6.1. The contractor shall provide a Range Operations Control Center (ROCC) to provide services for aviation, ordnance, and ground training users at Avon Park Air Force Range (APAFR) complex. The specific areas are Delta, Charlie/Echo, Bravo/Foxtrot Ranges and Arbuckle Field; however, other areas of the range can be requested and used on a case by case approval. The contractor shall provide flight and ground control advisory services for aircraft

that land and takeoff at Arbuckle Field (AGR) when requested by other users. The contractor shall perform systems checks on all radio equipment prior to the first scheduled mission of each day. Outages will be reported to the Government for correction.

5.6.1.1. Contractor personnel shall provide air traffic/airfield advisory services to aircraft arriving, departing or practicing approaches to Arbuckle Airfield and inbound or outbound aircraft for the gunnery ranges or drop zones.

5.6.1.2. The contractor shall relay information and perform functions outlined in the Disaster Response Flip Chart. The contractor shall relay updated and termination information as it occurs.

5.6.1.3. The contractor shall position AGE and other associated ground handling equipment when requested by the user.

5.6.1.3.1. The contractor shall perform daily maintenance checks on the AGE and report all outages to the QAE for correction. Outages shall be made in the Events Log.

5.6.1.4. The contractor shall approve Prior Permission Required (PPR) requests only under the following conditions:

5.6.1.4.1. Military fixed wing and helicopters performing weapons or flight training at APAFR and requesting to land are exempt from PPR requirements.

5.6.1.4.2. US Government and law enforcement aircraft engaged in search and rescue, medevac or other official business shall not require a PPR to land.

5.6.1.4.3. The contractor shall issue a PPR number to the requesting pilot. The number shall consist of two digits indicating the month, followed by two digits indicating the sequential request number. The contractor shall maintain a log of PPR numbers issued. The contractor shall develop his own form, (with the concurrence of the - QAE), which will include, as a minimum:

- The month for which the log is effective
- Date of PPR request
- Aircraft call sign
- Number and type of aircraft
- Estimated date and time of arrival
- Estimated date and time of departure
- Name, telephone number and organization of requester
- Purpose of flight, and
- PPR number issued.

5.6.1.4.4. The contractor shall maintain a PPR Log for a minimum of 1 year. The log shall be available for Government review. The log may be destroyed after one year. All other requests for airfield use not specifically stated in this PWS shall be referred to the QAE or FAC.

5.6.2. CONTROL OF GROUND TRAFFIC

5.6.2.1. When contractor personnel are not manning the range, it shall be the ROCC's responsibility to verify, prior to the first mission of each day, that all ranges are secure and the range is cleared of all unauthorized personnel and equipment.

5.6.2.1.1. The contractor shall control vehicles entering or transiting the range.

5.6.2.1.2. Under no circumstances shall vehicles be allowed to enter the range without approval when the range is hot. Authorized personnel and visitors shall be permitted to range access points where they must wait for clearance.

5.6.2.2. Contractor personnel shall control all airfield ground traffic movement. Ground traffic shall be controlled from either the range or the ROCC.

5.6.2.3. The contractor shall clear civilian aircraft to cross R2901 airspace, as mission traffic will allow. The contractor shall give priority to emergency and air evacuation flights. The contractor shall advise ranges when traffic is going to cross the airspace and shall provide the range with call sign of aircraft, type of aircraft, direction of flight, altitude, time entering and time departing.

5.6.2.4. The contractor shall handle unauthorized landings at APAFR IAW instructions in the Tower Emergency Checklist.

5.6.2.5. The contractor shall notify the Fire Department when aircraft need to be secured because of severe weather. If possible, coordinate to have the aircraft towed into the hangar for protection from the elements.

5.6.3. PARAJUMP OPERATIONS

5.6.3.1. When notified of an upcoming jump deployment, the contractor shall inspect the jump zone and adjacent short runway. The contractor shall remove debris that can be handled manually. In instances where the debris is large, and requires special moving equipment (such as a sweeper), the contractor shall notify OLA, DET 1, 347 OG/CE for removal support. After securing government support, the contractor shall re-inspect the jump zone prior to the jump

5.6.4. AIRCREW GROUND TRANSPORTATION

Temporary transportation for aircrews landing at APAFR shall be coordinated with QAE or Fire Station.

5.6.5. FUEL SERVICE

Contractor personnel shall telephone or radio request to the QAE for fuel servicing.

5.7. DISASTER PREPAREDNESS PLANNING AND OPERATIONS

5.7.1. The contractor shall maintain a Disaster Preparedness Plan for Charlie, Delta, Echo, Bravo and Foxtrot Ranges and Arbuckle Airfield, using Air Combat Command, MacDill AFB and Avon Park AF Range Regulations and Manuals with supplements. This program and plan shall be tailored to address the resources, capability and mission of APAFR. The primary objective of this program is to minimize the loss of operational capability of APAFR caused by wartime contingencies, natural disasters, major accidents, or toxic chemical incidents.

5.7.2. The contractor shall establish procedures for warning and protecting Avon Park AF Range, range personnel, and range resources from the effects of major aircraft accidents, toxic spills and acts of nature.

5.7.3. The contractor shall designate a disaster preparedness manager who shall have overall management responsibility for the Disaster Preparedness Program, designate a primary and alternate on-scene representative to coordinate and direct the DRF to designated sites during response to major accidents, natural disasters and enemy attacks on the air-to-ground complex, coordinate the DPP with QAE and maintain a list of response force personnel updated on a semiannual basis. MacDill AFB will provide training for disaster preparedness manager.

5.7.4. The contractor shall provide communications and coordination response to emergencies and aircraft crashes on Charlie, Delta, Foxtrot, Bravo and Echo Ranges and Arbuckle Airfield. The contractor's major accident response plans shall be compatible with the Avon Park Air Force Range Operations Plan.

5.7.5. The contractor shall establish and maintain a liaison with the QAE, Disaster Preparedness Monitor and state and local authorities for on-range situations. As soon as possible after a disaster occurs, the contractor shall restore essential communications for command and control.

DARE COUNTY BOMBING & GUNNERY RANGE ANNEX

SECTION C-1

1.5. PHYSICAL SECURITY

1.5.2. KEY AND LOCK CONTROL

1.5.2.1. Contractor shall provide necessary keys to the North Carolina Forest Service, installation forester and QAE.

1.6. HOURS OF OPERATIONS

1.6.1. NORMAL HOURS OF OPERATION

The flying operation shall be conducted on an advance notice basis. While the primary user is the 4th Fighter Wing, the range may be used by any Active Duty, Reserve or National Guard Unit. The contractor shall normally provide fourteen (14) hours of operating time (Mission Capable) per normal weekday, exclusive of government holidays, and seven (7) hours (Mission Capable) on 40 Saturdays per year. NOTE: Normal weekday hours are 0730 - 2130 hours Mon-Thurs and 0730 -1730 on Fridays. Saturday operations will normally be 0900 - 1600. However, the Government reserves the right to schedule operations during any fourteen- (14) hour period including Fridays at no additional cost to the Government. Stipulated hours are exclusive of travel time and time required for range preparation and shutdown.

1.6.2. OUTSIDE NORMAL HOURS OF OPERATION

The contractor shall be prepared to support a maximum of 50 operational hours per year.

1.10. ENVIRONMENTAL AND CULTURAL RESTRICTIONS

1.10.1. Prohibited on the range are most forms of recreation, including but not limited to animal, plant and mineral collection, recreational off-road vehicle use not associated with official or authorized activities or traffic flow through the range by the general public. Authorized activities on the range include hunting in authorized areas, scientific research when approved by 4th Civil Engineering Squadron/DE and 4 OSS/OST, and any other activities approved by 4th Operations Support Group Commander. The contractor shall ensure that all personnel comply with the limits placed on range usage. The contractor shall ensure, consistent with other requirements in this contract, protection and conservation of national and cultural resources and the welfare of native biotic communities. Furthermore, the contractor shall ensure any activity undertaken on the range complies with AF environmental regulations.

1.10.2. The Air Force intends to develop and maintain a timber-harvesting program through foresters assigned to the range. The contractor shall maintain liaison and coordination with the foresters to support this program.

SECTION C-3

3.1. GOVERNMENT-FURNISHED FACILITIES

3.1.1.2. OTHER GOVERNMENT OFFICES

The government maintains three - five (3 - 5) Civil Engineering/ Environmental Shop (CEV) personnel at the range. These personnel are provided with a section of the operations building to suit their office needs. The contractor shall provide this section of the building to CEV. No housekeeping requirements are required of the contractor in this section of the building.

3.2.5. REFUSE COLLECTION

The government will provide trash collection containers.

3.2.17. METEOROLOGICAL SERVICE

3.2.17.1. Range weather forecast shall be acquired from the 4th Weather Squadron each morning prior to the first operational flight of the day. Updates shall be provided as required from the Seymour Johnson Air Force Base weather shop. Additional weather data may be acquired from the Internet utilizing the computer available in the center tower.

3.2.17.2. The contractor shall refer all requests for weather forecasts, other than requests from aircrews, to the 4 OSS Weather Shop duty forecaster, Ext. 5391. All requests for climatological information received by the contractor shall be forwarded to the weather shop.

3.2.18. MEDICAL TREATMENT

3.2.18.1. All contractor personnel shall, within 30 days of contract start, and annually thereafter, have a hearing examination. Examination will be administered by Seymour Johnson Base Hospital, Physical Examination Section, Ext. 6137. Transportation cost will be borne by the contractor.

3.2.18.2. Industrial hygiene surveys by USAF HOSP/SGPB personnel will be annual and may be with or without prior coordination. In no case will USAF HOSP/SGPB visits disrupt or conflict with range operations. Environmental parameters such as lighting, noise, chemical hazards and laser hazards will be evaluated. It shall be the contractor's responsibility to ensure that all recommendations are complied with. Contractor shall reply in writing, within 30 days of receipt of survey, stating actions taken on the recommendations.

3.2.20. SCHEDULES

3.2.20.1. FLYING SCHEDULE

4th Operations Support Squadron/Scheduling Branch (4 OSS/OSOS) shall provide a hard copy, normally fax, of the weekly range mission schedule not later than close of business Friday prior to the scheduled week. Changes shall normally be relayed via telephone the day before range missions are flown. Changes involving less lead time shall be submitted via telephone by the

4OSS/OSOS as soon as possible to allow the contractor sufficient time for required preparatory actions.

3.2.20.2. EOD SCHEDULE

The Explosive Ordnance Disposal (EOD) range decontamination clearance schedule will be developed by 4th Fighter Wing Civil Engineering Squadron/Explosive Ordnance Disposal Section (4 CES/EOD). After coordination with 4 OSS/OST the schedule shall be forwarded to the contractor. This schedule shall be for one (1) calendar year, and reissued annually.

3.2.21. MISCELLANEOUS SERVICES

3.2.21.1. LAN Service

Dare County Range is currently connected to the Seymour Johnson AFB LAN. This service includes Internet access, e-mail service and CAMS access.

3.2.21.2. Services Through other Contracts

The North Carolina Forestry Service (NCFS) shall provide personnel and equipment for attack and suppression of range fires and for control and maintenance of preventive flood control structures, major road repairs and road shoulder foliage control. The contractor shall establish and maintain operational liaison with the NCFS for range fire prevention and suppression.

3.2.21.3. Fire Classifications

Due to the nature of the grounds at Dare County Range, peat moss wetlands covered with grass and shrubs, it is necessary to limit certain operations when the fire danger is high. When the North Carolina Forestry Service declares a fire class of 5, 6 or 7, denoting a high fire probability, the contractor shall immediately notify 4 OSS/OST, the 4th Operations Command Post (4 OSS/OSCP) and the QAE. Fire classifications and associated restrictions shall be provided to the contractor at contract start date.

SECTION C-4

4.1. GOVERNMENT REIMBURSEMENT FOR ITEMS

4.1.1. Reimbursable items at Dare County may include but are not limited to:

4.1.2. Sand and ABC mixed gravel used on strafe pits, target pads and/or road repairs.

4.1.3. Supplies to maintain government owned/provided equipment (i.e. Salt and Clorox for water system etc.).

4.2. FIRST AID

Because of the absence of nearby medical facilities, the contractor shall ensure at least four employees are trained to render first aid/CPR. Training should be equivalent to an American Red Cross Standard First Aid/CPR course in order to provide initial treatment for all personnel who are on the range. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. The contractor shall replenish supplies as necessary.

4.3. WATER SYSTEMS

Monthly, a water sample shall be taken from the well and wastewater outlet and transported to the appropriate laboratory by the contractor. The Bioenvironmental Engineering Office, SJAFB, shall provide containers and training in the proper method of collecting the sample, to contractor personnel, at the range. The contractor shall schedule required training. Correction of contaminated water problems not within the contractor's capability shall be a government responsibility.

4.3.1. Water System

At least one contractor employee shall hold a minimum of "Certified Water Treatment Facility Operator, Grade C-Well" certification issued by the North Carolina Water Treatment Facility Operators Board of Certification. This individual shall assume duties as "Operator in Responsible Charge" (ORC) of the water purification system at Dare County Range.

4.3.1.1. The ORC shall, at a minimum:

- Visit the facility at least weekly
- Manage and document operations and maintenance of the facility each day they occur.
- Comply with all provisions of Article 2, Chapter 90-A of the General Statutes of North Carolina as they pertain to water systems
- Draw and document water samples from the well via the kitchen tap and ice machine
- Perform all other required actions associated with this facility

4.3.2. Wastewater Treatment Facility

At least one contractor employee shall hold a minimum of "Certified Wastewater Treatment Facility Operator, Grade I" certification issued by the North Carolina Water Pollution Control System Operators Certification Commission. This individual shall assume duties as "Operator in Responsible Charge" (ORC) of the wastewater treatment system at Dare County Range.

4.3.2.1. The ORC shall, at a minimum:

- Visit the facility at least weekly
- Manage and document operations and maintenance of the facility each day they occur.
- Comply with all provisions of Article 3, Chapter 90-A of the General Statutes of North Carolina as they pertain to wastewater systems
- Draw and document water samples from the wash rack sand filter outlet
- Perform all other required actions associated with this facility

4.4. PERSONNEL SAFETY EQUIPMENT

Except for laser goggles and fire extinguishers, the contractor shall provide all personnel safety equipment to include but not limited to hearing protection, hard hats, and safety goggles and/or prescription safety glasses.

4.5. COMMUNICATIONS

4.5.1. RADIOS

The contractor shall maintain and service all government furnished radios listed in Technical Exhibit 5.

4.5.2. HAND HELD VHF/FM RADIOS

The contractor shall provide all portable dual channel radios, chargers and batteries required to support this PWS. Radios shall be made available to EOD personnel, subcontractors and range visitors when required in the performance of official duties on the range. Maintenance of all radios will be contractor responsibility. All radios will transmit/receive on government directed frequencies 165.0125 and 165.01375 MHz.

4.6. RANGE CLEARANCE SUPPORT

The contractor shall accomplish the following actions during each range clearance:

- Provide equipment and qualified operators to assist EOD in performing range clearances and munitions recoveries.
- Provide One (1) scoop loader type vehicle capable of traversing gravel target surfaces and equipped with a bucket capable of lifting 2500 pounds to a height of 10 feet.
- Provide One (1) munitions recovery vehicle capable of recovering 2000-pound MK-84 type bombs from the target areas.
- Provide One (1) 1/2 ton, 4 X 4, full size pickup truck.
- Provide access to operations building and written instructions on obtaining airlift evacuation due to serious injury.
- Manning of the range operations building and/or tower will be required during EOD range clearance operations.
- Assist EOD by positioning roadblocks during EOD detonations.
- Mark with a 6 inch square red flag any unknown or unfamiliar munitions items dropped/located on the range complex. These items will be inspected by EOD on the next scheduled clearance.

SECTION C-5

5.1. OPERATONS

5.1.1. TOWER OPERATIONS

5.1.1.1.1. Prior to range operations, the contractor shall secure all perimeter gates to include the gates on Maple Road, Beechland Road, Faircloth Road and the West end of Air Force Shell Road. During operational hours these gates shall remain closed and locked. Upon completion of operations, the contractor shall open the gates on Maple Road to allow hunters use of this road. In addition, on "WAR DAYS", the 3rd Friday and following Tuesday of each month, the contractor shall close and lock the gates on Dry Ridge South Road, Nichols Road and Whipping Creek Road. These gates shall be opened at the close of operations each day. The gate on Stomper Road may remain open during normal operations as long as safety of the public can be assured. However, upon closing the range for the day, this gate shall be closed and locked.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall plow each strafe impact area weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a magnetic device to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the target to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling.

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acoustiscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. The strafe poles (telephone poles) are 35' long. When in the ground, 30 feet will extend above ground level with the top of the poles leaning back at a 10-degree angle. (See Technical Exhibit 3) The poles/posts will be painted white annually.

5.2.1.1.6. The contractor shall replace unserviceable sleeves as required. The sleeves (casings) may be constructed from pipe or 55 gallon drums which have been welded together end-to-end. Sleeves will be buried in the ground to a minimum depth of 5 feet with 6-12 inches above ground to prevent dirt from falling into the sleeve. Two or more aircraft tires or suitable substitutes are stacked in front of the sleeve to prevent ricochets.

5.2.1.1.7. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.8. The contractor shall maintain the 4 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 1,600 feet long and 100 feet wide. The lines shall be cut to remove vegetation. Vegetation height and cutting frequency will be as specified in Technical Exhibit 6.

5.2.1.1.9. The contractor shall maintain the 3 foul lines located 2000 feet, 4000 feet and 6000 feet from the strafe pits. Each line is approximately 4000 feet long and 200 feet wide the lines shall be cut to remove vegetation. Vegetation height and cutting frequency will be as specified in Technical Exhibit 6.

5.2.1.1.10. The contractor shall build and paint strafe panels as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.1.1.11. The contractor shall maintain and repair the strafe pit access roads.

5.2.1.1.2. CONVENTIONAL BOMB CIRCLE

A target vehicle marks the target center. Two concentric circle canals shall encompass the target vehicle and have a radius of 75 feet and 150 feet.

5.2.1.1.2.1. The contractor shall repair or replace the target vehicle when directed by 4OSS/OST. The rate of ordnance delivery and resultant damage to the target may warrant semi-annual replacement. The contractor shall render the target vehicle soft. The contractor shall inspect the target semi-annually as a minimum to determine repair (to include painting) and replacement requirements. The rule of thumb regarding replacement is as follows: If the target is unidentifiable because of grossly distorted silhouette, it shall be replaced. Minor distortions may require repair. The contractor shall accomplish repair, replacement and Target Area Debris (TAD) and Target Area Scrap (TAS) removal within five workdays after receipt of written notifications.

5.2.1.1.2.2. The contractor shall level the area within the 75-foot radius circle semi-annually as a minimum to keep the area smooth. The contractor shall keep the bomb circle filled with ABC mixed gravel to keep water from pooling.

5.2.1.1.2.3. The contractor shall cut around the twenty (20) run-in line markers and two bomb targets. The area within a ten-foot radius of each marker and between a 75-foot and 500-foot radius of each conventional target will be cut to remove vegetation. Vegetation height and cutting frequency will be as specified in Technical Exhibit 6.

5.2.1.1.2.4. The contractor shall provide and maintain a night lighting system in the area immediately adjacent to the target vehicle. Lighting system will be inspected prior to night flying.

5.2.1.1.2.5. Contractor target maintenance and refurbishment functions which require personnel ingress to the target area, shall not be attempted until Explosive Ordnance Disposal (EOD) area decontamination has been accomplished in the working area(s).

5.2.1.1.3. TACTICAL TARGETS

Tactical targets include but are not limited to missile storage area, Laser Guided Bomb target, convoy/missile site, radar van and airfield with aircraft. The contractor shall construct additional tactical targets as requested by 4 OSS/OST.

5.2.1.1.3.1. Because of limited destructive effects of practice ordnance and reduced usage of the tactical target area, it is anticipated that target repair and replacement requirements will be minimal compared to the conventional bomb circle requirements.

5.2.1.1.3.2. Replacement targets must be situated as close as possible to the exact location of the removed target. Contractor shall provide 4 OSS/OST with correct latitude/longitude position to the 1000th of a minute (Degrees, Minutes and Decimal Minutes [DDMM.MMM]) of the surveyed aiming point to match the current latitude/longitude measurements utilized by the 4 FW Squadrons.

5.2.1.1.3.3. The contractor shall inspect the tactical/mock targets semi-annually as a minimum to determine repair (to include painting) and replacement requirements. Replacement criteria are as follows: Targets that are unidentifiable because of grossly distorted silhouette shall be replaced, unless repair is feasible and more economical. Minor distortions in tactical/mock targets silhouette shall require repair. The contractor shall accomplish repair or replacement, TAD and TAS removal within 20 workdays of receipt of written notification.

5.2.1.1.3.4. Contractor target maintenance and refurbishment functions which require personnel ingress to the target area, shall not be attempted until Explosive Ordnance Disposal (EOD) area decontamination has been accomplished in the working area(s).

5.2.1.1.4. NUCLEAR TARGET

A target vehicle marks the nuclear target. A 500-foot radius circular canal encircles the target area.

5.2.1.1.4.1. The contractor shall repair or replace the target vehicle when directed by 4 OSS/OST. The rate of ordnance delivery and resultant damage to the target may warrant semi-annual replacement. The contractor shall render the target vehicle soft. The contractor shall inspect the target semi-annually as a minimum to determine repair (to include painting) and replacement requirements. The rule of thumb regarding replacement is as follows: If the target is unidentifiable because of grossly distorted silhouette, it shall be replaced. Minor distortions may require repair. The contractor shall accomplish repair, replacement and Target Area Debris (TAD) and Target Area Scrap (TAS) removal within five workdays after receipt of written notifications.

5.2.1.1.4.2. Contractor target maintenance and refurbishment functions which require personnel ingress to the target area, shall not be attempted until Explosive Ordnance Disposal (EOD) area decontamination has been accomplished in the working area(s).

5.2.1.1.4.3. The contractor shall provide and maintain a night lighting system in the area adjacent to the target vehicle. Lighting system will be inspected prior to night flying.

5.2.1.1.4.4. The contractor shall cut the nuclear lead-in line and nuclear target area. The line and target shall be cut to remove vegetation. Vegetation height, cutting area and frequency will be as specified in Technical Exhibit 6.

5.2.1.1.4.5. The contractor shall paint, replace, repair and maintain the four nuclear lead-in line markers. One marker is positioned 7000 feet from the target and three are 13,000 feet from the nuclear target. The billboard type markers are 20 feet square and constructed of galvanized pipe

bolted to a sheet metal frame attached to telephone poles in the ground. Due to sturdiness of lead-in markers minimum repair and maintenance will be required.

5.2.1.1.4.6. The contractor shall repair and maintain the two radar reflectors located in the vicinity of the nuclear target. Each radar reflector is a piece of reflective metal material mounted on a metal frame. The contractor upon request of 4 OSS/OST will reposition radar reflectors.

5.2.1.1.5. AIRFIELD

The airfield layout is comprised of a 2,438-foot runway with mock target aircraft in place at surveyed locations on the runway.

5.2.1.1.5.1. Semi-annually, the contractor shall configure the runway target. As a minimum, the contractor shall insure the present design and sharp contrast with surrounding vegetation is maintained. See Technical Exhibit 6. This foliage control shall not be considered as a part of the annual mowing requirement.

5.2.1.1.5.2. Mock target aircraft, which are unidentifiable because of grossly distorted silhouette, shall be replaced with like model or suitable substitute, which the contractor shall be required to render "soft". If this is unfeasible, the contractor with the approval of the QAE shall fabricate mock target aircraft as replacements. Mock target aircraft with grossly distorted silhouettes shall be replaced unless repair is feasible and more economical. Mock target aircraft with minor silhouette distortions may require repair. The contractor shall accomplish repair, replacement, rebuild actions and TAD and TAS removal, within 20 workdays of determining replacement/maintenance is necessary.

5.2.1.1.5.3. Contractor target maintenance and refurbishment functions which require personnel ingress to the target area, shall not be attempted until Explosive Ordnance Disposal (EOD) area decontamination has been accomplished in the working area(s).

5.2.1.3. SCORING SYSTEM MAINTENANCE

5.2.1.3.1. The government supply system shall be the primary source of scoring system components. If it is determined that required parts are not available through the government supply system, or that excessive delay will be experienced, the contractor may procure parts through commercial vendors on a direct order basis, with government reimbursement.

5.2.1.3.2. 4th CS, Material Control shall be notified of scoring system replacement parts requirements.

5.2.1.3.3. The contractor shall immediately report all red outages (equipment no longer usable) to 4 CS, Job Control and the QAE. The scoring systems, East and West, shall be reported separately. Once the contractor determines the reason for the outage, the contractor shall again contact Job Control and provide the following:

5.2.1.3.3.1. REASON FOR OUTAGE

5.2.1.3.3.2. Repair action accomplished if the job is closed within two hours, or estimated time of return to operation for outages exceeding two hours.

5.2.1.3.3.3. If the equipment remains unusable due to lack of parts, the contractor shall provide 4 CS, Job Control with a list of the parts required and the source from which the parts will be obtained.

5.2.1.3.3.4. The contractor shall enter a report of all contacts with 4 CS in the range daily events log.

5.3. ENVIRONMENTAL

5.3.1. Non-Toxic Waste

The contractor shall transport all Non-toxic waste to the appropriate disposal site at least weekly.

5.3.2. Hazardous Waste

This category shall not be disposed of on range property. 4th Civil Engineering Squadron/DEEV, ext. 6690, will direct final disposition.

GRAND BAY BOMBING & GUNNERY RANGE ANNEX

SECTION C-1

1.2. CONTRACTOR PERSONNEL

1.2.4.1. APPEARANCE

1.2.4.1.1. UNIFORMS

The contractor personnel shall wear distinctive clothing (uniforms) with the contractor's name and employee's name on the shirt. During hot weather, the shirt may be substituted for T-shirts but must still display the company's name and the individual's name.

1.2.6. EMPLOYEE TRAINING

1.2.6.1. FIRE FIGHTING TRAINING

All contractor employees shall receive training relating to fire fighting issues (see Annex C-4, paragraph 4.20). The Range Fire Chief shall be the instructor for the training.

1.2.6.2. ENVIRONMENTAL MONITORS TRAINING

The contractor's primary and alternate environmental and hazardous material handling monitors shall attend annual Resource Conservation Recovery Act (RCRA) training. Training is provided by the Government. The contractor shall contact the 347 CES Environmental flight for scheduling and training of RCRA. Upon completion of the annual training, copies of the employees' certificates shall be provided to the QAE.

1.6. HOURS OF OPERATION

1.6.1. NORMAL HOURS

The contractor shall provide a minimum of 77 hours of mission capable time per week. Hours of operations will fluctuate with the flying window. During a normal week, the Range will be mission capable 17 hours per day, Monday through Thursday and 8 hours on Friday. These hours may be adjusted at the government's option to meet exercise requirements. The OSS Current Operations Scheduling personnel will provide the contractor with a vulnerability window for each day of the following week no later than close of business on Friday. The contractor shall accept changes to the daily Range schedule that are coordinated 60 minutes in advance and fall within the planned vulnerability window. Changes of shorter notice shall be accepted at the option of the contractor. The contractor shall have someone available to answer the phone during the vulnerability window to accept same day schedule changes.

1.6.2. OUTSIDE NORMAL HOURS OF OPERATION

The contractor shall be prepared to support 80 operational hours per year.

SECTION C-3

3.1. GOVERNMENT FURNISHED PROPERTY

3.1.1. GOVERNMENT FURNISHED FACILITIES

3.1.1.2. QAE OFFICES

Chief QAE and QAE shall each have an office located in building 10, west wing.

3.1.3. GOVERNMENT FURNISHED MATERIALS

3.1.3.1. SCORING SOFTWARE

The government will provide software for scoring computations.

3.2. GOVERNMENT FURNISHED SERVICES

3.2.5.1. RESPONSIBILITIES OF MOODY AFB FIRE CHIEF

The MAFB Fire Chief will serve as Range fire protection coordinator. He will provide immediate fire fighting and assume operational control of all Range fires and/or aircraft accidents upon arriving on the scene. Range fires will probably have to be fought using dozers with fire plows or excavators in peat bog areas. Approximately 7-9 months of the year, it is very wet and probably only four-wheeled drive fire trucks or ATVs could leave established roads.

3.2.17. METEOROLOGICAL SERVICE

Moody AFB Weather Branch will provide weather forecasting and surface observation support. The only weather equipment to be actually located at the Range is a wind measuring set (FMQ-13 or equivalent) and AWDS. The surface wind sensors located at the Range will provide a reading in the RCO tower. This weather equipment, located at the Grand Bay Range, will be provided by the government and maintained by the contractor. The government will provide test equipment for wind sensors and a separate contract will maintain AWDS.

3.2.19. MEDICAL TREATMENT

Emergency medical services will be available at the MAFB hospital only in situations involving life or death or prevent undue suffering. Contractor shall contact hospital's Resource Management Office within 24 hours of the services rendered. The contractor shall reimburse the government for emergency treatment. The contractor shall report all accidents to the QAE and CO.

3.2.20. MISSION SCHEDULES

The contractor will be provided a Range mission schedule by OSS Current Operations Scheduling Section in hard copy, on a weekly basis, not later than close of business the previous Friday. The contractor is responsible for picking up all printed schedules at MAFB. Changes will normally be relayed via telephone/fax the day before Range missions are to be flown. Same day scheduling information will be obtained from the Wing Command Post. Changes involving additional Range periods with less than 60 minutes notice will be left to the discretion of the RCO. If the contractor accepts a short-notice addition to the daily schedule from an airborne aircraft, he shall relay the change to MAFB Command Post so it can be documented on the same day schedule. The Contractor will record any changes, additions, deletions, or cancellations, including the reasons for any deviations from the published schedule.

SECTION C-4

4.1. PETROLEUM, OIL, LUBRICANTS (POL)

The contractor shall provide all fuels, lubricants, oil, and grease for contractor-owned vehicles, main compound, flank tower, and portable generators.

4.2. TRASH RECEPTACLES

Contractor shall provide a commercial dumpster for Range use. Weekly pickup required. Contractor shall furnish all trashcans and shall be responsible for the proper disposal of all garbage and/or trash.

4.3. INTRA-RANGE COMMUNICATIONS

Contractor shall provide hand-held radios and a base station with a civil/FCC frequency band for communication with surface vehicles on the Range and as a backup between the towers.

Commercial frequencies will be used. Contractor shall use a repeater system, if required, to enable complete radio coverage on the Range.

4.4. RADIOS AND CHARGERS

Contractor shall provide and maintain four hand-held radios and chargers for Moody support agencies. Agencies include CES, one; Fire Department, one; and QAE, two. An additional two radios will be provided, maintained, and controlled by the contractor for the temporary use of authorized visitors as approved by the QAE.

4.5. COMMERCIAL TELEPHONE LINE

The contractor will provide their own commercial telephone service.

4.6. CELLULAR TELEPHONE

The contractor shall provide a cellular telephone for emergency use when other communications fail. Phone shall be used to coordinate with RAPCON, Tower, Command Post, etc. Contractor shall provide phone number to CO, QAE, ROO, and the above sections. Contractor shall also provide a cellular phone for QAE's local use only.

4.7. FURNITURE

Contractor shall provide all office desks, chairs, tables, file cabinets, refrigerators, etc., as required for contractor's use.

4.8. COMPUTER SYSTEM

Contractor shall provide two computer systems: one for scoring of bombs and one for generation of Range reports. Computer shall be capable of generating score sheets and ordering and tracking publications (such as AFI, AFP, Technical Orders, etc.). CD-ROM will be utilized to provide access to required, but less frequently used, AFI and Technical Orders. Hard copies will only be provided for AFIs or Technical Orders that are used daily. Computer minimum requirement: 486 with 300 MHz, 64 MB RAM, 5 GB hard drive and fax/modem 56K, CD ROM 32X speed Reader, double speed multi-session. During the period of the contract, additional upgrades may be required due to USAF-wide technological improvements.

4.9. RECORDER

The contractor shall provide a voice-activated recorder capable of recording all UHF and VHF radio transmissions. All tapes shall be maintained for a period of 24 hours or as indicated by the QAE.

4.10. FAX MACHINE

Contractor shall provide fax machine to fax Weapons Delivery Scoring Record to local squadrons after Range flights.

4.11. MANUAL SCORING DEVICE

Contractor shall provide a manual scoring device/board for back-up use with the M-2 scoring system when the computer system is inoperative.

4.12. DRINKING WATER

Contractor shall provide potable drinking water and cups. Also provide water for the ice machine. (The government shall provide four water coolers--five-gallon jug type--and an ice-making machine.)

4.13. PERSONAL SAFETY EQUIPMENT

Contractor shall provide all personal safety equipment to include, but not limited to, hard hats, safety glasses, ear protection, gloves, safety-toed shoes, etc., as required by safety regulations.

4.14. CLEANING GREASY EQUIPMENT

Contractor shall provide an environmentally safe method of cleaning greasy equipment parts. A recyclable solvent-type parts cleaner is recommended.

4.15. DRIP PANS

Contractor shall provide drip pans for leaking equipment, including targets at Bemiss Field, to prevent contamination of soil or concrete.

4.16. PAINT

Contractor shall provide all paint required for targets, strafe panels, run-in-line barrels, and tires. Oil-based paint shall be used for strafe panels. Contractor's option of oil or latex paint may be used on targets, barrels. Paint shall be lead free.

4.17. PAINT TARGETS

Contractor shall paint a minimum of 20 targets per year. This will include tanks, simulated missile launchers, vertical targets, and Leggo target and aircraft. Colors shall be picked by ROO/QAE. Contractor shall provide paint for run-in lines, barrels, and tires; colors to be determined by ROO/QAE. (Most targets will be one color ("OD"); main bomb circle and high angle strafe/rocket target will be white; Leggo target will be black, if required.)

4.18. FIRST AID

Because of the absence of nearby medical facilities, the contractor shall ensure that at least one employee per shift is trained to render first aid/CPR. Training should be equivalent to an American Red Cross Standard First Aid course in order to provide initial first aid treatment for all personnel who are on the Range. See Section C-5, Fire Protection. Contractor shall provide

adequate first aid materials. Materials shall be kept in a sanitary and usable condition. Supplies shall be replenished as necessary and available at each building.

4.19. SMOKEY SAM TRAINING

Contractor shall train all personnel prior to performing Smokey Sam operations. Train in accordance with TOs and Weapons Safety program.

4.20. FIRE PROTECTION

The contractor shall provide fire protection on a daily basis during the entire period the Range is in operation. Also, the contractor shall be on call and available for all areas of Grand Bay Range. The contractor shall provide one trained and qualified person who is designated Range Fire Chief and a minimum of four trained fire fighters. No controlled burning is allowed without a permit from the US Forestry Service. The contractor is liable for all claims that result from a fire caused by contractor personnel who burn without a permit.

4.20.1. RESPONSIBILITIES OF RANGE FIRE CHIEF

The Range Fire Chief must possess a minimum of three years experience in fire fighting with a level of expertise necessary to instruct fire fighters in Range and structural fire fighting, inspection of buildings and Range, and operation of assigned vehicles. The Fire Chief must also be proficient in all assigned hand-operated equipment. The Fire Chief must be able to train personnel on fire prevention, first aid, and fire suppression with authoritative knowledge. The Range Fire Chief must know and understand the primary duties and responsibilities, which include:

- Directing fire suppression
- Contacting the Forestry Service for burn permits and notifying Moody AFB Fire Department and QAE of controlled burns
- Developing fire-fighting procedures for new and unusual conditions
- Ensuring continual contact with management and employees to install site fire prevention awareness
- Developing and providing training to contractor personnel in fire protection practices

4.20.7. FIRE FIGHTING VEHICLES AND MANNING

It is recommended the contractor provide at least one all-terrain, fire-fighting vehicle with required ancillary equipment. The vehicle must have off-road capability and be able to combat and extinguish grass and brush fires. The vehicle must have a minimum of 500 gallons of water and must pump 500 GPM at 150 PSI. The tank and pump unit maybe skid mounted on an appropriate vehicle. The vehicle must be equipped with a radio (installed or hand held) for two-way communications with the Range tower. The vehicle must have 2-1/2-inch hose and 1-3/4-inch hose connecting nozzles and other appropriate hardware to provide adequate fire protection for the structural building on site. The vehicles will be manned on response by the Range Fire Chief and a minimum of two fire fighters. The Range Fire Chief and firefighters must respond and perform according to standards established by AFI 32-2001.

4.20.8. TRAINING REQUIREMENTS

The contractor must ensure the Range Fire Chief provides training to all Range personnel on a recurring basis. The Range Fire Chief will conduct proficiency training in the following subjects at the indicated frequency. A written record of the training, with and signatures of participants

will be maintained for one year. The following training will be conducted in accordance with USAF directives:

| | |
|-------------------------------------|------------|
| Emergency First Aid | Annual |
| Breathing Equipment | Semiannual |
| Range Brush Fire Truck | Semiannual |
| Range Emergency Response Procedures | Semiannual |
| Structural Tactics and Strategy | Semiannual |

4.20.9. FIRE PREVENTION PROGRAM

The contractor shall ensure that a fire prevention program is established to protect personnel, mission, and operational and maintenance efficiencies. During Range vulnerability times or when flying is in progress, the door to the fire truck garage shall be open or the truck removed from the garage.

4.20.10. MONTHLY FIRE INSPECTIONS

The contractor shall make a monthly fire inspection of all Range buildings. A report of these inspections will be kept on file for one year.

4.20.11. FIRE NOTIFICATIONS

Ensure MAFB Fire Department is immediately notified of all fires and/or aircraft accidents occurring on the Grand Bay Range.

SECTION C-5

5.1. OPERATIONS

5.1.3.1. REMOTE CONTROL SYSTEM

The contractor shall operate and maintain the remote controlled night lighting system for main bomb circle, high angle strafe, and the Grand Bay Range drop zone lighting. Remote control from the flank tower. Remote operation of the IR target is included in this system.

5.1.5.1. SCORING SYSTEM

The contractor shall rely primarily on the M-2 scoring system installed in the towers to provide accurate weapons delivery scores. Contractor shall provide a manual scoring system/board in case the computerized system becomes inoperative. All personnel shall be trained in this manual procedure.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall plow each strafe impact area (350 x 200 ft) weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a magnetic device to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the target to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling.

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acousticscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. The strafe poles (telephone poles) are 35' long. When in the ground, 30 feet will extend above ground level with the top of the poles leaning back at a 10-degree angle. (See Technical Exhibit 3) The poles/posts will be painted white annually.

5.2.1.1.6. The contractor shall replace unserviceable sleeves as required. The sleeves (casings) may be constructed from pipe or 55 gallon drums which have been welded together end-to-end. Sleeves will be buried in the ground to a minimum depth of 5 feet with 6-12 inches above ground to prevent dirt from falling into the sleeve. Two or more aircraft tires or suitable substitutes are stacked in front of the sleeve to prevent ricochets.

5.2.1.1.7. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.8. The contractor shall maintain the 4 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 2,000 feet long and 12-18 feet wide. The lines shall be graded semiannually to remove vegetation and debris.

5.2.1.1.9. The contractor shall maintain a foul line. The foul line is approximately 18 feet wide and extends from tower across Shinner Pond Road to west foul line poles. The foul line is defined by white sand. The sand will be replaced as required.

5.2.1.1.10. The contractor shall build and paint strafe panels, as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.1.2. HIGH ANGLE STRAFE/ROCKET TARGET

5.2.1.2.1. The contractor shall maintain target vehicles for a high angle/rocket target. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The

contractor shall repaint the vehicle every second quarterly clearance/maintenance or sooner as determined by the QAE.

5.2.1.3. CONVENTIONAL BOMB CIRCLE

5.2.1.3.1. The contractor shall maintain on conventional circle, two concentric circles comprised of adjacently spaced painted aircraft tires, or suitable substitute, having radius of 23 meters (75 feet) and 46 meters (150 feet). Contractors shall repaint the tires at least every second quarterly clearance/maintenance operation or sooner as determined by the QAE. (See Technical Exhibit 3)

5.2.1.3.2. The contractor shall maintain in the center of the conventional circle a target vehicle. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle every second quarterly clearance/maintenance or sooner as determined by the QAE.

5.2.1.3.3. The contractor shall during the quarterly clearance/maintenance operation remove the tires and grade, or blade the area within a 300-foot radius to smooth the surface and remove all vegetation. Tires will be replaced upon completion. The contractor shall keep the bomb circle filled with dirt as required to keep water from pooling.

5.2.1.4. TACTICAL TARGETS

5.2.1.4.1. The contractor shall repair, or replace target vehicles and mock targets as determined by the QAE. In general, target vehicles, which are unidentifiable because of a grossly distorted silhouette, shall be replaced with like model or suitable substitute. If this is infeasible the contractor, with the approval of the QAE, shall fabricate mock targets as replacements. In general, mock targets with grossly distorted silhouettes shall be replaced unless repair is feasible and more economical. Target vehicles and mock targets with minor silhouette distortions shall be repaired. The targets will be kept clear of obscuring vegetation at least semiannually and painted olive drab green annually.

5.2.1.5. IR TARGETS

5.2.1.5.1. The contractor shall maintain the IR Targets on a quarterly basis. All heaters and wiring systems will be inspected for damage and replaced if required. The target vehicles will be painted OD green annually. The targets will be kept clear of obscuring vegetation in accordance with the range cutting scheduling.

5.2.1.6. GOVERNMENT-FURNISHED TARGET MATERIALS

See Technical Exhibit 5.

5.2.1.6.3.1. TARGET VEHICLE MAINTENANCE

Contractor shall remove complete chassis on step-vans/vans versus removing engine and transmission.

5.2.2.1.1. RANGE DECONTAMINATION AND CLEARANCE

Contractor shall perform scheduled decontamination, clearance, and despecularization IAW with AFI 13-212 and local supplements. Contractor shall provide front-end loaders and vehicles to support clearance.

5.2.2.1.2. ANNUAL CLEARANCE

In addition to normal annual clearance, the contractor shall police-up the helicopter expended 7.62 brass. This may be accomplished mechanically or by hand. Due to grass and undergrowth, not all brass will be retrieved. Brass located in wetlands does not require removal.

5.2.2.1.3. MAINTENANCE AND CLEARANCE SCHEDULES

The maintenance and clearance schedules shall be developed jointly by the contractor and the QAE, then approved by the ROO. These schedules shall include recurring maintenance requirements included in Section C-5 of this PWS as well as corrective actions for outstanding discrepancies annotated on RCO daily reports and those identified by the QAE. Maintenance and clearance shall be scheduled to optimize Range availability. The ROO is the approving official for all maintenance and clearance, which will require the Range to be closed.

5.2.3.1.1. ROADS AND CLEARED AREAS

All roads leading into and within the Grand Bay Range are packed with sand base and clay. During wet seasons, with repeated vehicular usage, the base will deteriorate at the surface, causing deep ruts. If unabated, hazardous driving conditions will result. The roads may also become extremely slick with resultant hazardous driving conditions. Contractor shall maintain firebreaks, utility right-of-ways, foul lines, run-in-lines, roads, and cleared areas around the impact zones. Contractor shall repair any damage to Range paths or roadways regardless of how the road or path was damaged.

5.2.3.1.2. IMPROVED ROADS

The contractor shall maintain all roads within Grand Bay Range in a state of repair, which allows safest operation of military and civilian vehicles at a maximum speed of 20 MPH and to carry 25,000 pounds per axle load. Experience has proven that these roads should be bladed, graded, and/or dragged at least monthly. A greater frequency is sometimes required during the rainy season. Additionally, portions of the road may require a mixture of dirt and gravel fill, especially in the soft spots. Roads shall be open and accessible to the Range at all times except during adverse weather conditions (i.e., tornado or excessive rain). Roads shall be open for use no later than 24 hours after termination of adverse weather. Adverse weather, which will require closing of access roads, will be determined by the QAE/ROO. Any road segment not capable of 20 MPH traffic shall be brought up to the 20 MPH conditions for traveling. Contractor shall grade and/or blade roads, so roads are crowned for drainage. Ditches shall be maintained, modified, and constructed to facilitate proper drainage (See Technical Exhibit 3).

5.2.3.1.3. MAINTAIN ROADS

The contractor shall maintain road banks and sides by cutting and/or mowing foliage, grass, and tree limbs to prevent scratching vehicles. This includes cutting down and removing trees, which impair or threaten to impair paths and roadways. This includes cutting the foliage along Shiner Pond Road and around the dock. This is a quarterly requirement. The contractor shall maintain

the roads including grading and clearance of roadbed surface, ditches, and culverts to permit safe vehicle passage.

5.2.3.1.4. SHINER POND ROAD

Daily, the contractor shall pick up all trash, bottles, etc., between the east and west gates of Shiner Pond Road.

5.2.3.1.5. PAVED AREAS

The following areas are paved with asphalt: Powers Road, main compound parking area, visitors' parking area. Contractor shall make minor repairs.

5.2.3.1.6. VISITORS' VIEWING AREA

The contractor shall maintain the visitors' bleachers, decking, steps, walkways, and wood areas. The wood areas shall be treated with Thompson's Water Seal (or equivalent) semiannually. The contractor shall clean the visitors' picnic area before and after Range tours. This includes washing the area with soap and water, removing dirt, dust, residual food, and beverage items. The contractor shall provide a trashcan and liners for this area.

5.2.3.1.7. SEMI-IMPROVED GROUNDS MAINTENANCE

The contractor shall maintain semi-improved grounds as follows:

5.2.3.1.7.1. Contractor shall edge grass/weeds down to water line at three ponds located between Shiners Pond Road and Visitors' Viewing area in conjunction with normal cutting. Also, trim around the trees and obstructions in these areas.

5.2.3.1.7.2. Contractor shall edge grass/weeds around IR targets on Bemiss Field in conjunction with normal cutting.

5.2.3.1.7.3. Contractor shall utilize mowers/tractors with rubber tires only.

5.2.3.1.7.4. Contractor shall not mow or operate vehicles in obvious wetlands, depressed areas, different vegetation, etc.

5.2.3.1.7.5. ROO/QAE and environmental personnel will determine areas that are NOT to be cut.

5.2.3.1.7.6. Location III, Zones 1, 2, and 3: Vegetation and grass does not require cutting in wetlands. Tractors and mechanical equipment shall not be operated in wetlands.

5.2.3.1.8. IMPROVED GROUNDS MAINTENANCE

The contractor shall maintain improved grounds as follows:

5.2.3.1.8.1. Grass shall be mowed and trimmed around all structures. This includes the area under the bleachers. The grass and weeds shall be pulled from the cracks of all walkways. Clippings shall be swept/blown from all walkways and the surrounding areas shall be raked.

5.2.3.1.8.2. Improved grounds shall be mowed approximately 16 times a year. The dates will be coordinated with the QAE/ROO.

5.2.3.1.8.3. Lawn mowing shall be accomplished in the Visitors' Viewing Area including the viewing stand berm (see map).

5.2.3.1.9. FOLIAGE CONTROL

5.2.3.1.9.1. Option 1

Contractor shall mechanically clear-cut trees, brush, etc., from the tree line southeast of the main compound and north to Shiner Pond Road--a wetland area. This shall include both sides of the foul line. Also included is the area between the foul line poles north of the Shiner Pond Road. These trees and brush shall be cut mechanically with track-type vehicles with cutter head--no rubber-tired vehicles will be used.

NOTE: Trees and brush shall be cut no more than one foot above water line.

NOTE: The water line varies from dry to 3-4 feet, depending on rainfall and run off from the areas north of the Range.

NOTE: This area shall be cut first basic year and every third year thereafter.

5.2.3.1.9.2. Option 2

Contractor shall herbicide the above noted areas to kill foliage in lieu of mechanically cutting the trees and brush during the initial contract year and every third year thereafter. Command and base environmental shop shall determine the type of herbicide to be used and method of application. Contractor shall provide approved herbicide and means of application (ground vehicle, aerial spraying).

NOTE: See sketches of area to be clear cut or herbicided.

NOTE: The contracting officer shall determine if Option 1 or Option 2 will be exercised.

5.2.3.1.9.3. HERBICIDES

The contractor shall have capability to apply herbicides on fence rows, parking lots, target areas, etc., as indicated by the QAE/ROO. The person applying the herbicide shall have current certification by the State of Georgia. The contractor shall comply with AFI 32-1053, as well as all federal, state, and local directives. The contractor shall provide data on herbicide usage to 347 CES/CEV monthly, including a negative report. The report shall include type chemical used, where used, amount used, etc. The contractor shall provide all safety equipment and sprayers. Government will provide herbicide and a storage area on MAFB. The contractor shall pick up the herbicide and return any unused portion to the storage location. Contractor shall provide copies of certification to QAE and CO.

5.2.3.1.9.4. UTILITY RIGHT-OF-WAYS, FOUL LINES, AND CLEARED AREAS

The contractor shall ensure these areas remain cleared of tall brush and trees so access is maintained and a definable cleared area or line is shown. This includes extended foul line areas.

The contractor shall maintain and repair grounds, lawns, parking lots, and pavements around building towers and operations compound to ensure neat appearance and safe working environment at all times. The contractor shall maintain the equipment and materiel storage areas in a neat and safe environment.

5.2.3.1.9.5. EROSION CONTROL

Contractor shall perform erosion control, stabilize the area, and install silt fencing to prevent further damage when directed by the QAE.

5.2.3.1.9.6. IRRIGATION

Contractor shall water grass and shrubbery as required.

5.2.3.2. CAPITAL EQUIPMENT

See Technical Exhibit 5.

5.2.6.1. GOVERNMENT FURNISHED COMMUNICATIONS EQUIPMENT

See Technical Exhibit 5.

5.3.1. ENVIRONMENTAL—WETLANDS

The Range has numerous wetland areas; however, the in-progress contract study of wetlands delineation is incomplete, specifically which areas are wetlands or what is upland is not fully determined. Therefore, the contractor shall not cut trees, dig new ditches, canals, excavate, dredge, grade, or disturb soil (new work) without approval from the QAE/ROO and the 347th Civil Engineer Squadron's Environmental Flight (347 CES/CEV). (See Environmental Flight's map of known wetlands, Technical Exhibit 3). By obtaining approval in advance of starting new work, this can avoid Notice of Violation (NOV) fines, etc., from the Corps of Engineers, state, or other agencies. In some cases, AF Form 813, Preliminary Environmental Impact Analysis, must be submitted. Contractor shall assist by providing support data to QAE/ROO. This is a lengthy process for approval. Contractor shall process AF Form 103, Base Civil Engineering Work Clearance Request, for new work.

5.3.1.1. Contractor shall also track such items as fuel use, bombs dropped, bullets fired, welding rods used, etc., as required for environmental clean air report.

5.4.1. ADMINISTRATION--KEY PERSONNEL

Contractor shall provide the QAE a roster of the names of key personnel who can be reached 24-hours per day, seven days a week.

5.4.2. ADMINISTRATION--DAILY EVENTS LOG

Prepare and maintain a log of daily events on the operations of the Range. Log all pertinent events, such as off-Range releases, weather damage, fires, crashes, etc.

**HOLLOMAN AFB ANNEX
OSCURA, RED RIO, McGREGOR RANGES**

SECTION C-1

1.2.5. EMPLOYEE SECURITY REQUIREMENTS

1.2.5.1. The contractor shall obtain the following pass and identification items: Base Vehicle Passes and White Sands Missile Range (WSMR) Up-Range Badges.

1.2.5.2. The contractor shall report all incidents of theft and vandalism to the QAE, Holloman AFB Security Police, and WSMR Military Police at WSMR Main Post.

1.2.5.3. In instances where contractor precautions prove inadequate; for example, a forcible entry attempt by unauthorized personnel; the contractor shall through the QAE, request WSMR security assistance.

1.2.6. EMPLOYEE TRAINING

1.2.6.1. Establish and maintain an ongoing training program to ensure contractor personnel are current in their job knowledge. This program shall include, as a minimum, range safety, explosive ordnance disposal (EOD), fire prevention and protection, aircraft crash procedures, first aid, security programs, tower and associated ordnance delivery scoring operations, range maintenance, vehicle operation, and range control officer operations.

1.2.6.2. When government assistance for specialized training is necessary, forward a request for training assistance to 49 OSS/OSTA.

1.2.6.3. The contractor Chief RCO will train and certify any government employee identified by the QAE as needing RCO training. Qualified individuals training records will be maintained with the contractor training records, or as designated by the QAE.

1.6. HOURS OF OPERATION

1.6.1. NORMAL HOURS OF OPERATIONS

Contractor shall provide controlled range operations from 0800 to 2300 hrs Monday through Thursday, and from 0800 to 1700 hrs on Friday during Daylight Saving time and from 0800 to 2000 hrs Monday through Thursday and from 0800 to 1700 on Friday during Standard time. The contractor shall (may split shifts) cover all prescheduled night operations (after 1700 hours) as required. The contractor shall man the range at a minimum of 8 hours per day (0800-1700), 5 days a week regardless of flying schedule.

1.6.1.2. The contractor shall make every effort to gain access to the range during WSMR scheduled evacuations/road blocks. When access is denied the contractor will be at the roadblock 1 hour prior to scheduled block lift time.

1.6.2. OUTSIDE NORMAL HOURS OF OPERATION

The contractor shall be prepared to support a maximum of 50 hours per fiscal year.

1.10. ENVIRONMENTAL CULTURAL RESTRICTIONS

1.10.1. All forms of recreation, including but not limited to: mineral collecting, off-road vehicle use, motorcycle use, exploring, archaeological or historical artifact collecting, and picnicking are prohibited on the range by WSMR regulations, except in designated areas. The contractor shall ensure protection and conservation of natural and cultural resource and the welfare of native biotic communities consistent with other requirements in this contract.

1.10.2. Significant archaeological discoveries have been made near the target complex on McGregor Range which require special maintenance and clearance procedures (See Technical Exhibit 3).

1.10.2.1. During range maintenance operations all vehicles shall remain on the target circle, lead-in line, and access road at all times.

1.10.2.2. No vehicles shall be used to pick up expended bombs outside of the fenced area or lead-in line during range clearance operations.

SECTION C-3

3.2. GOVERNMENT FURNISHED SERVICES

3.2.1. GOVERNMENT FURNISHED UTILITIES

The Government will provide Electricity, non-potable water and sewage.

3.2.2. TELEPHONE SERVICES

The Government will provide: a range intercom system Two Defense Switch Network (DSN) lines, direct dial to Holloman AFB, and commercial service to the Holloman AFB local area. Two "hotline" systems are also provided. Telephone and intercom equipment, circuit, and line repair, will be provided by WSMR communications personnel. A commercial phone line is available for use by the contractor at his expense.

3.2.4. REFUSE COLLECTION

The government will provide a trash collection container and collection service for non-hazardous material.

3.2.5. FIRE PROTECTION

3.2.5.1. FIRE SUPPRESSION

3.2.5.1.1. Fire fighting support will be furnished by the Government to assist the contractor at the range in the event of a brush or facility fire. IAW the Host Tenant Support Agreement with WSMR, fire-fighting support will come from Stallion Range Center. Response time can be expected to be approximately 40 minutes after notification.

3.2.5.1.2. The Holloman AFB live fire training facility will be available for auxiliary firefighter training. The contractor shall coordinate with the Base Fire Protection Branch for their training requirements. During training, the contractor shall ensure aircraft crash recovery procedures are adequately covered.

3.2.7. AUTOMATED DATA PROCESSING EQUIPMENT (ADPE) TRAINING
N/A

3.2.13. PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)
N/A

3.2.14. TRANSPORTATION OF PROPERTY
N/A

3.2.15. BASE SUPPLY

The Government will provide Access to the Base Supply System in support of Government provided equipment and facilities.

3.2.17. METEOROLOGICAL SERVICE

The Government will provide maintenance support for all meteorological equipment listed in Technical Exhibit 5.

3.2.19. MEDICAL TREATMENT

Emergency services will be available at the Holloman AFB Hospital only in job related incidents involving life or death or to prevent undue suffering. Individuals involved will be billed at the civilian reimbursement rate.

3.2.20. SCHEDULES

The 49 OSS/OSOS will provide a hard copy of the weekly range mission schedule to the contractor not later than the close of business on the previous Friday. Changes will normally be relayed by telephone or as printed on the daily schedule, on the day prior to the mission to be flown. Changes involving less lead time will be telephonically submitted by the 49 OSS/OSOS as soon as possible to allow the contractor sufficient time for required preparatory actions. The Government will provide the contractor (when possible) 24-hour notice of required night operations.

SECTION C-4

4.1. GOVERNMENT REIMBURSEMENT FOR ITEMS

4.1.1. The New Mexico Gross Receipts Tax (NMGR) may be applied to reimbursement invoices.

4.2. FIRE PROTECTION

The contractor shall provide sufficient equipment and personnel to ensure that fire suppression capability on Oscura Range exists that allows for the protection of Government facilities/equipment and property within the range boundaries.

4.2.1. The contractor shall provide one trained and qualified person with three years experience, at the senior fire officer level, who shall be designated as the Oscura Range Fire Chief and auxiliary fire suppression personnel as required.

4.2.2. The Range Fire Chief must possess the level of expertise necessary to instruct and train other fire fighting personnel in the use, operation, and inspection of the assigned fire fighting equipment.

4.3. DRINKING WATER

The contractor shall provide all water cooler dispensing equipment and potable drinking water.

4.4. POL

The contractor shall provide all fuels; lubricants, oil, and grease for contractor owned vehicles, power tools and government-furnished equipment.

4.5. TARGET BUILDING MATERIALS

The contractor shall provide all target building materials to include, but not be limited to, lumber, paint, nails, plywood, and telephone poles, required to perform range target maintenance and construction functions outlined in Section C-5.

4.6. PROPANE

The contractor shall provide all propane fuel for heating the buildings, and illumination of IR targets.

4.7. PERSONNEL SAFETY EQUIPMENT

The contractor shall provide all personnel safety equipment (except those listed in Technical Exhibit 5) to include, but not be limited to, hard hats, safety glasses, and ear protectors.

4.8. FIRST AID

Because of the absence of nearby medical facilities, the contractor shall ensure employees are trained to render first aid/CPR. Training should be equivalent to an American Red Cross Standard First Aid/CPR course in order to provide initial treatment for all personnel who are on the range. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. Supplies shall be replenished as necessary by the contractor.

4.9. COMMUNICATIONS

4.9.1. UHF Radio

The contractor shall maintain and service all government furnished UHF radios listed in Technical Exhibit 5.

4.9.2. VHF/FM Radios

The contractor shall provide and maintain all base, mobile, or hand held VHF/FM communications equipment to assist with the performance of this contract. Frequencies will be those already established for range operations. Contractor furnished VHF/FM radios shall have a

minimum of two channels. Channel 1 (repeater station) shall be set to transmit on 148.050 MHz and receive on 149.475 MHz. Channel 2 shall be set to transmit and receive on 149.475 MHz

4.10. VEHICLES

4.10.1. EOD

The contractor shall provide one front-end loader and driver, that is capable of unearthing general purpose practice bombs, for EOD personnel during all range clearance operations.

4.10.2. FIRE

The contractor shall provide an all terrain vehicle for fire suppression. The vehicle must have a minimum 500 gallons water tank capacity and fire pump with sufficient discharge capability to combat and extinguish brush and grass fires.

SECTION C-5

5.1. OPERATIONS

5.1.5. SCORING SYSTEMS OPERATIONS

5.1.5.1. In the event of total communication failure between the flank tower and main tower or tower computer failure, the contractor shall immediately start M-2 scoring operations and record the impact coordinates in the order they are spotted. Upon completion of the mission, scores will be loaded into the computerized scoring system and the score sheet faxed to the appropriate unit. The contractor shall maintain the computer scoring system in all computers provided in Technical Exhibit 5.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall plow each strafe impact area (350 x 200 ft) weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a magnetic device to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the target to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling.

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acoustiscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. The strafe poles (telephone poles) are 35' long. When in the ground, 30 feet will extend above ground level with the top of the poles leaning back at a 10-degree angle. (See Technical Exhibit 3) The poles/posts will be painted white annually.

5.2.1.1.6. The contractor shall replace unserviceable sleeves as required. The sleeves (casings) may be constructed from pipe or 55 gallon drums which have been welded together end-to-end. Sleeves will be buried in the ground to a minimum depth of 5 feet with 6-12 inches above ground to prevent dirt from falling into the sleeve. Two or more aircraft tires or suitable substitutes are stacked in front of the sleeve to prevent ricochets.

5.2.1.1.7. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.8. The contractor shall maintain the 2 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 2,000 feet long and 12-18 feet wide. The lines shall be graded semiannually to remove vegetation and debris.

5.2.1.1.9. The contractor shall maintain the 2 foul lines on either side of the main tower (See Technical Exhibit 3). Each foul line is approximately 18 feet wide and extends to the firebreak road on the left range and to WSMR range road #11 on the right side. The foul line is defined by a single row of engine containers or suitable substitutes painted white along the centerline of the bladed area. The markers shall be replaced or repainted as required. The markers shall be evenly spaced apart for a distance of 500 feet.

5.2.1.1.10. The contractor shall build and paint strafe panels as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.1.2. HIGH ANGLE STRAFE TARGET

5.2.1.2.1. The contractor shall maintain target vehicles for a high angle target. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle every second quarterly clearance/maintenance or sooner as determined by the QAE. (See Technical Exhibit 3)

5.2.1.3. CONVENTIONAL BOMB CIRCLE

5.2.1.3.1. The contractor shall maintain on conventional circle, two concentric circles comprised of adjacently spaced painted aircraft tires, or suitable substitute, having radius of 23 meters (75

feet) and 46 meters (150 feet). Contractors shall repaint the tires at least every second quarterly clearance/maintenance operation or sooner as determined by the QAE. (See Technical Exhibit 3)

5.2.1.3.2. The contractor shall maintain in the center of the conventional circle a target vehicle. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle every second quarterly clearance/maintenance or sooner as determined by the QAE.

5.2.1.3.3. The contractor shall during the quarterly clearance/maintenance operation remove the tires and grade, or blade the area within a 300-foot radius to smooth the surface and remove all vegetation. Tires will be replaced upon completion. The contractor shall keep the bomb circle filled with dirt as required to keep water from pooling.

5.2.1.3.4. The contractor shall place standard size vehicles or suitable replacement at 500', 1,000', 1,500' and 2,000' north of both conventional circle target, along an extension of the 348 degree (magnetic) run-in heading. The devices are used for Aim-Off Distance markers for aircrew training. The contractor shall keep the markers free of obscuring vegetation and paint the markers white, at least annually.

5.2.1.3.5. The contractor shall maintain on an annual basis the target on McGregor in accordance with paragraph 5.2.1.3.1.

5.2.1.4. TACTICAL TARGETS

5.2.1.4.1. OSCURA RANGE

5.2.1.4.1.1. The contractor shall repair, or replace target vehicles and mock targets as determined by the QAE. In general, target vehicles that are unidentifiable because of a grossly distorted silhouette shall be replaced with like model or suitable substitute. If this is infeasible the contractor, with the approval of the QAE, shall fabricate mock targets as replacements. In general, mock targets with grossly distorted silhouettes shall be replaced unless repair is feasible and more economical. Target vehicles and mock targets with minor silhouette distortions shall be repaired. The targets will be kept clear of obscuring vegetation at least semiannually and painted olive drab green annually.

5.2.1.4.2. RED RIO RANGE

5.2.1.4.2.1. The contractor shall repair, rebuild, reconstruct or replace all target vehicles and target areas during the annual maintenance period (See Target Layout in Technical Exhibit 3).

5.2.1.4.2.2. The contractor shall repair, or replace target vehicles and mock targets as determined by the QAE. In general, target vehicles that are unidentifiable because of a grossly distorted silhouette shall be replaced with like model or suitable substitute. If this is infeasible the contractor, with the approval of the QAE, shall fabricate mock targets as replacements. In general, mock targets with grossly distorted silhouettes shall be replaced unless repair is feasible

and more economical. Target vehicles and mock targets with minor silhouette distortions shall be repaired.

5.2.1.4.2.3. The contractor shall rebuild or reconstruct all dirt revetment walls to a height of seven feet. The walls shall be cleared of all vegetation. Revetment openings shall be approximately 60 feet wide. This maintenance will be performed twice a year of the following schedule: spring (April-May) the one hundred series targets (see Target List and Maps Technical Exhibit 3) and fall (September) all target areas.

5.2.1.4.2.4. The contractor shall paint all mock targets and target vehicles olive drab green (except for the SA2 Site and Aim-off markers which will be painted white) during the Fall clearance/maintenance period. Additionally the one hundred series targets shall be painted during the spring clearance/maintenance period.

5.2.1.4.2.5. The contractor shall grade or blade all existing target areas maintaining present design (except those targets on ungraded surfaces) to present a sharp contrast to surrounding desert vegetation. This maintenance will be performed twice a year on the following schedule: Spring (April-May) the one hundred series targets (see Target List and Maps Technical Exhibit 3) and Fall (September) all target areas.

5.2.1.4.2.6. The contractor shall fill to smooth surface live bomb craters around the live drop area as identified by the QAE. Maintenance of the live drop target area will be completed during the annual fall clearance/maintenance period.

5.2.1.5. NUCLEAR TARGET CIRCLE

5.2.1.5.1. The contractor shall maintain on the nuclear circle, two concentric circles of adjacently spaced, painted aircraft tires, or suitable substitutes, having a radius of 75 feet and 150 feet. The contractor shall repaint the tires every second Quarterly Clearance/Maintenance Operation, or sooner, as determined by the QAE.

5.2.1.5.2. The contractor shall maintain in the center of the nuclear circle a target vehicle. The target vehicle shall be replaced when it no longer has a recognizable silhouette and cannot be restored by performing minor repairs. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle olive drab green annually.

5.2.1.5.3. The contractor shall during the quarterly clearance/maintenance operation remove the tires and grade or blade the area within a 300-foot radius to smooth the surface and remove all vegetation. Tires will be replaced upon completion. The contractor shall keep the circle filled with dirt as required to keep water from pooling.

5.2.1.5.4. The contractor shall maintain the graded 23,000 foot run-in line with timer reference points and the four concentric graded circles to a smooth surface and remove all vegetation semiannually.

5.2.1.5.5. The contractor shall maintain, repair or replace the radar reflectors semiannually to ensure the reflectors are free of vegetation and in good repair.

5.2.5.6. GOVERNMENT FURNISHED TARGET MATERIAL

Items listed in Technical Exhibit 5.

5.2.5.7. TARGET ALIGNMENT POLES

The contractor shall maintain and replace “600 poles” as required. Poles will be painted white on an annual basis.

5.2.1.8. MAVERICK TARGET

5.2.1.8.1. The contractor shall maintain the AFSWC target area located off range road 20 in the Stallion Area of White Sands Missile Range as a Maverick Target. The target area will be maintained on a semi-annually schedule.

5.2.1.8.2. The contractor shall maintain a graded area that is a minimum of 12 feet in width and at least 1500 feet long. The graded area shall be free of vegetation and all holes from weapons impacts shall be filled and smoothed.

5.2.1.8.3. The contractor shall semiannually construct and transport to the target area up to eight target vehicles, consisting of mock tanks. The targets shall be painted white or OD Green as designated by the QAE. The mock tanks shall be placed on the graded area spaced 150 feet apart in a convoy configuration.

5.2.1.8.4. The contractor shall clear the target area of all TAD and TAS from the target area during each semiannual clearance operation.

5.2.1.9. BORE SITE TARGET

5.2.1.9.1. The contractor shall of an annual basis maintain the Bore Sight Target. The area around the target shall be level to preclude water from pooling and the bulls-eye repaint with white paint. The target heating system shall be serviced as required.

5.2.2. RANGE DECONTAMINATION/CLEARANCE

5.2.2.1. After EOD has preformed tasks outlined in Para 3.2.18.1. The contractor shall clear all target areas of TAD, TAS, TAR/OR as prescribed in AFI 13-212.

5.2.2.21. The contractor shall complete all maintenance/clearance operation on Oscura Range ensuring the range remains operational. This can be accomplished by working one side of the range at a time. Quarterly operations shall be completed within a 5 working day period. Annual operations shall be completed within a 10 working day period.

5.2.2.3. The contractor shall complete all maintenance/clearances operations on Red Rio Range within the 15-day semiannual and 30-day annual range closure period.

5.2.2.4. The contractor shall complete all maintenance/clearance operation on McGregor Range within a 5-Day annual range closure period.

5.2.3. REAL PROPERTY AND CAPITAL EQUIPMENT MAINTENANCE

5.2.3.1.1. ROAD MAINTENANCE

5.2.3.1.1.1. Improved Roads

The contractor shall maintain the road that leads from WSMR Range Road 12 to Oscura Range complex, which is approximately 2 miles long in a state of repair that allows safe operation of military and civilian vehicles at a maximum speed of 45 mph. These roads shall be bladed and graded at least quarterly. A greater frequency is sometimes required during the rainy season. The road may require a mixture of dirt and gravel fill to maintain the surface. The contractor will take all actions needed to maintain the road to the standards of this paragraph.

5.2.3.1.1.1. Unimproved Roads

The contractor shall maintain all access roads, foul line roads, run-in lines, firebreak roads, and target access roads at Oscura each quarter by grading/blading, to a minimum width of 12 feet to allow a safe operation of military and civilian vehicles at a maximum speed of 25 miles per hour. (Exception: The foul lines and run-in lines as noted earlier will be bladed to a minimum 18 foot width.)

5.2.3.1.1.3. The contractor shall maintain to the above standard all Red Rio roads and firebreaks roads on a semiannual basis.

5.2.3.1.1.4. The contractor shall maintain the McGregor access road in a passable condition to allow for safe operation of military and civilian vehicles.

Helicopter Pad

The contractor shall repaint the helicopter pad on an annual basis. The area around the pad will be covered with gravel to preclude blowing dust.

5.2.4. VEHICLE MAINTENANCE

N/A

5.3. ENVIRONMENTAL

5.3.1. NONHAZARDOUS WASTE

The contractor shall provide all transportation and documentation to remove and dispose of all non-hazardous waste too large to fit in the government-furnished container located at Oscura Bombing Range. A county landfill is located on US Highway 54, 23 miles south of Alamogordo NM.

5.5. LOGISTICS

5.5.2. The Contractor shall accomplish all required paper work to requisition parts to support government furnished property. The contractor shall maintain a forward supply point at Oscura Range.

5.7. FIRE SUPPRESSION

Contractor shall provide fire suppression personnel and equipment that ensures protection for Oscura Range as required. (See C-4, Para 4.2 of this annex)

MELROSE BOMBING AND GUNNERY RANGE ANNEX

SECTION C-1

1.2. CONTRACTOR PERSONNEL

1.2.5. EMPLOYEE SECURITY REQUIREMENTS

The contractor shall report immediately all incidents of theft, vandalism and trespassing to the QAE. The QAE will follow-up with appropriate agencies. In instances of forcible trespass or attempted trespass by unauthorized personnel, the contractor shall immediately notify the Cannon AFB Security Police desk, 4111.

1.6. HOURS OF OPERATION

1.6.1. NORMAL HOURS OF OPERATION

The flying operations will be on an advance notice basis. While the primary user is the 27th FW, the range may be used by any active duty, Reserve, or National Guard Unit. The contractor shall normally provide thirteen (13) hours of operation time (mission capable) per normal weekday Monday through Thursday, six (6) hours of operation (mission capable) time on Friday and six (6) hours of operation (mission capable) one weekend per month, if needed. Operating time will be exclusive of recognized holidays. Night operations (Monday-Thursday) are included in the normal 13 hours per day. The government may periodically require support outside the scheduled operating hours/vulnerability period. Contractor shall support such missions, as needed.

1.6.1.2 OUTSIDE NORMAL HOURS OF OPERATION

Priority mission requirements (exercise, surge, ORE/ORI) may require additional operational hours to accomplish. The contractor shall provide the capability to meet all schedule and unscheduled operation changes and requirements deviating from paragraph 1.6.1 above, not to exceed eighty (80) hours per year. These hours will be billed to the government as overtime. Stipulated hours are exclusive of travel time to and from the range. Scheduling, 27 OSS/OSOS, will request all such changes through 27 OSS/OSTR at least 24 hours before they are required.

3.2. GOVERNMENT FURNISHED SERVICES

3.2.20. SCHEDULES

3.2.20.1. 27 FW Scheduling Section (27 OSS/OSOS) will provide the hard copy weekly range mission schedule to the contractor not later than the close of business the previous Friday. Changes will normally be relayed via telephone the day before range missions are flown. Changes involving less lead-time will be submitted as soon as possible to allow the contractor sufficient time for required preparatory action.

3.2.20.2. During exercises, the exercise coordinator will provide the Range Operations Officer and the contractor Site Manager with a briefing of proposed operations at least

two weeks prior to the exercise to ensure that the proposed plan will incur no expenses in excess of those provided for this contract. If additional expenses are anticipated, the exercise coordinator shall inform the Range Operations Officer (ROO) and the QAE no later than one week prior to the exercise.

SECTION C-4

4.1. GOVERNMENT REIMBURSEMENT FOR ITEMS

4.1.1. The New Mexico Gross Receipts Tax (NMGRT) may be applied to reimbursement invoices.

4.2. COMMUNICATIONS

The contractor shall provide base, mobile and hand-held radios, chargers and batteries required to operate Melrose Bombing Range. Hand-held radios shall be made available to government personnel when required on official business i.e., EOD disposal, aircraft crash/rescue, inspections, etc. Maintenance of all radios will be the contractor's responsibility. All radios will transmit/receive on government directed frequencies.

4.3. FIRST AID

Because of the absence of nearby medical facilities, the contractor shall ensure that at least three employees are trained to render first aid/CPR. Training should be equivalent to an American Red Cross Standard First Aid/CPR course in order to provide initial treatment for all personnel who are on the range. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. The contractor shall replenish supplies as necessary.

SECTION C-5

5.1. OPERATIONS

5.1.5. SCORING OPERATIONS

5.1.5.1. In the event of a scoring system failure, TOSS Control Center personnel will advise the range main tower RCO immediately and 27 FW/CP, Ext. 4-2253, within 10 minutes of system failure. Scoring will be done using the single operable system or by RCO until one of the systems becomes operational. 27 FW/CP will be notified when the TOSS system(s) become operational again.

5.1.5.2. Contractor personnel shall print computer generated TOSS reports. The originals shall be forwarded weekly to the appropriate squadrons. When requested, the contractor shall generate a scoring sheet to report strafe scores. Contractor personnel shall not change any bomb or strafe scores except when a scoring error is validated through replot. This does not apply during Pecos Thunder or other OG/CC designated exercises.

5.1.5.3. TOSS Control Center personnel shall maintain hard copies of all range period calibration information to allow ordnance-scoring capability to be recalibrated in the event of calculator program failures.

5.1.5.4. The contractor shall maintain the capability to TOSS score missions whenever the range is operational. The contractor shall verify TOSS scoring accuracy on all usable targets semiannually and record any discrepancies in the maintenance log. Contractor shall maintain a system to score all 67 night mission targets. Night missions begin two hours after sunset.

5.1.7. WATCH FOR THE UNUSUAL

5.1.7.1. FIRE RESPONSE

The contractor shall escort the fire department to all off impact area fires. The contractor shall respond to all on/off impact area fires with the road grader at the discretion of the RCO. The grader will only be used if requested by the fire department through the RCO or if there is an immediate danger to personnel, equipment or livestock. The RCO shall assess the incident and close the range as necessary. All fires, controllable or not controllable, shall be immediately reported to the Range Fire station and CAFB Alarm Center. The contractor shall assist the Fire Department during controlled burns.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall plow each strafe impact area (350 x 200 ft) weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a magnetic device to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the target to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling.

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acoustiscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. The strafe poles (telephone

poles) are 35' long. When in the ground, 30 feet will extend above ground level with the top of the poles leaning back at a 10-degree angle (See Technical Exhibit 3).

5.2.1.1.6. The contractor shall replace unserviceable sleeves as required. The sleeves (casings) may be constructed from pipe or 55 gallon drums which have been welded together end-to-end. Sleeves will be buried in the ground to a minimum depth of 5 feet with 6-12 inches above ground to prevent dirt from falling into the sleeve. Two or more aircraft tires or suitable substitutes are stacked in front of the sleeve to prevent ricochets.

5.2.1.1.7. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.8. The contractor shall maintain the 2 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 2,000 feet long and 12-18 feet wide. The lines shall be disk-plowed semiannually or as necessary to remove vegetation and debris.

5.2.1.1.9. The contractor shall build and paint strafe panels as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.1.2. HIGH ANGLE STRAFE TARGET

5.2.1.2.1. The contractor shall maintain target vehicles for a high angle target. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement.

5.2.1.3. CONVENTIONAL BOMB CIRCLE

5.2.1.3.1. The contractor shall maintain on conventional circle, two concentric circles comprised of adjacently spaced painted aircraft tires, or suitable substitute, having radius of 23 meters (75 feet) and 46 meters (150 feet). Contractors shall repaint the tires as determined by the QAE. (See Technical Exhibit 3)

5.2.1.3.2. The contractor shall maintain in the center of the conventional circle a target vehicle. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle as determined by the QAE.

5.2.1.3.3. The contractor shall grade, or blade the area within a 300 foot radius to smooth the surface and remove all vegetation as necessary or directed by the QAE.

5.2.1.4. TACTICAL TARGETS

5.2.1.4.1. The contractor shall repair, or replace target vehicles and mock targets as determined by the QAE. In general, target vehicles that are unidentifiable because of a grossly distorted silhouette shall be replaced with like model or suitable substitute. If this is infeasible the contractor, with the approval of the QAE, shall fabricate mock targets as replacements. In general, mock targets with grossly distorted silhouettes shall be replaced unless repair is feasible and more economical. Target vehicles and mock targets with minor silhouette distortions shall be repaired. The targets will be kept clear of obscuring vegetation at least semiannually or directed by the QAE.

5.2.1.4.2. The contractor shall grade or blade all existing target areas maintaining present design (except those targets on ungraded surfaces) to present a sharp contrast to surrounding desert vegetation. This maintenance will be performed twice per year, or as determined by the QAE.

5.2.1.5. NUCLEAR TARGET CIRCLE

5.2.1.5.1. The contractor shall maintain on the nuclear circle, two concentric circles of adjacently spaced, painted aircraft tires, or suitable substitutes, having a radius of 75 feet and 150 feet. The contractor shall repaint the tires as determined by the QAE.

5.2.1.5.2. The contractor shall maintain in the center of the nuclear circle a target vehicle. The target vehicle shall be replaced when it no longer has a recognizable silhouette and cannot be restored by performing minor repairs. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement.

5.2.1.5.3. The contractor shall grade or blade the area within a 300 foot radius to smooth the surface and remove all vegetation as necessary or directed by the QAE.

5.2.1.5.4. The contractor shall maintain the disked the run-in line and the four concentric circles disked to remove all vegetation semiannually or as the directed by the QAE.

5.2.1.5.5. The contractor shall maintain, repair or replace the radar reflectors semiannually or as directed by the QAE to ensure the reflectors are free of vegetation and in good repair. Reflectors shall be relocated as directed by the QAE.

5.2.3. REAL PROPERTY AND CAPITAL EQUIPMENT

5.2.3.1. REAL PROPERTY

5.2.3.1.1. For fire suppression purposes, the contractor shall maintain the in ground water storage tank at one-half full capacity (12,500 gallons) as a minimum. If the water storage level falls below one-half capacity, the contractor shall: notify the Fire Alarm Center, cease all water use except for actual emergencies, and take immediate action (i.e., haul water) to replenish stored water to above minimum requirements.

5.2.3.1.2. The contractor shall inspect the asphalt access road each duty day and perform minor maintenance as required. The contractor shall maintain the asphalt by cold-rolled patching or other suitable means when potholes, deep cracks, or crumbling are deemed a safety hazard by the QAE.

5.2.3.1.3. The contractor shall maintain roads depicted in Technical Exhibit 3 with material provided by the government. The roads will be maintained in a condition that will allow passage of medium weight motor vehicles at speeds of up to 35 MPH without damage.

5.2.3.1.4. The contractor shall maintain internal improved roads and firebreaks on the interior surrounding the impact area and the support compound to a width not less than 15 feet. Firebreaks on the outer perimeter road shall be maintained to a width not less than 15 feet.

5.2.3.1.5. The contractor shall maintain the grounds and cut back foliage surrounding contractor maintained structures (see Technical Exhibit 5 for structures/facilities), in the range main compound (excluding CEV compound), Gecco compound (excluding decorative landscaping) and GECCO sites 1, 2, and 3 (see Technical Exhibit 3 for maps and layouts). Decorative Foliage may be used around support buildings provided it is kept neatly trimmed and watered. All dead/dried foliage shall be removed before it becomes a fire hazard. Foliage around the external perimeter of the support compound shall be mowed to limit the spread of range fires to the compound. Foliage shall be mowed as necessary or directed by the QAE.

5.2.3.1.6. There is an EOD Disposal Range/Thermal Treatment Facility open detonation site located at the range. The site is used by EOD personnel to dispose of hazardous munitions. When in use, the contractor shall grade and clear an area to a radius of 500 feet from the center of the thermal treatment pit when not in use.

5.2.3.1.7. The contractor shall inspect, repair and maintain gates, fences, and signs as required to ensure a viable impediment to inadvertent and unauthorized access. As a minimum, the contractor shall inspect the entire impact area fence line (during non-operational hours) twice each month and report any damage or encroachment to the contracting officer or QAE.

5.2.3.2. CAPITAL EQUIPMENT

5.2.3.2.1. The contractor shall inspect all government-furnished fire extinguishers monthly. Should any extinguisher require servicing or maintenance, the contractor shall deliver the extinguisher (s) to 27 OSS/OSTR for exchange.

5.3. ENVIRONMENTAL

5.3.1 REFUSE DISPOSAL

Refuse of any variety shall not be disposed of on the range. There is no approved landfill at the range; therefore, the contractor shall dispose of all generated refuse (trash/garbage) off base at an approved landfill in accordance with all local, state, and federal regulations. Offensive refuse (trash/garbage) shall be collected and transported in closed containers/cans. Trash containers and vehicles will be suitable to ensure trash will not be strewn or lost enroute from the range to the landfill. Burning of kitchen and office refuse will be accomplished only in accordance with approved burn permits.

5.3.2. SOIL

Damage to the soil will be minimized; e.g., use of a mower deck, chisel plow or sweep plow is preferred. Disking and scraping will be limited to clearing the vegetation from areas where no other solution is possible as determined by QAE. When allowed to grow, foliage shall be free of combustible material and maintained as specified by the QAE. During the dormant season the vegetation shall be maintained as specified by the QAE. All foliage control shall be accomplished without the use of herbicides and chemicals unless prior approval is obtained from the QAE, FAC, and 27 CES/CEV. Bomb craters shall be filled and leveled when necessary or as directed by the FAC or QAE.

TABLE 1
MELROSE AIR FORCE RANGE
OPERATIONS & MAINTENANCE CONTRACT FOR
DRINKING WATER SYSTEMS

| TASK | DESCRIPTION | FREQUENCY | COMMENTS |
|-------------|---|--|--|
| 1 | General system check to ensure chlorination system is working properly (e.g., tube is in place) | Daily | |
| 2 | Determine potency of bleach containers used for dechlorination | At time new container is purchased and once per week thereafter when product is used | Contractor to purchase test paper (available locally). Strongly recommended by New Mexico Environment Department |
| 3 | Determine chlorine residual concentration, using test kit, at service taps | Daily at two locations (Contractor's admin facility & one 27 OSS Gecco facility) | Residual must be within 0.5 mg/L - 2.0 mg/L range. Adjust chlorine concentration accordingly. |
| 4 | Repair pipeline from 25,000 gallon underground tank to Gecco facilities | As required | Disinfect by flushing line and adding chlorine to achieve proper residual concentration prior to reactivation |
| 5 | Repair pipeline from well #13 to 25,000 gallon underground tank | As required | Disinfect by flushing line and adding chlorine to achieve proper residual concentration prior to reactivation |
| 6 | Inspect 25,000 gallon underground storage tank | Weekly | Ensure lid is secured at all times and other situations which may facilitate intrusion of foreign material |

Note: Daily frequency corresponds to the contractor's normal workweek as specified in the contract.

TABLE 2
WATER SYSTEM OPERATOR & SUPERVISOR
CERTIFICATION REQUIREMENTS
MELROSE AIR FORCE RANGE

1. Applicable Regulation: State of New Mexico Drinking Water Regulations, Title 20, Chapter 7, Part 4, Subpart II (20 NMAC 7.4.II.).

2. General Requirements:

a. The contractor shall comply with all requirements of State of New Mexico Regulations 20 NMAC 7.4.II.

b. All operations and maintenance of all or any part of the public water supply system shall be performed by, or under the direct supervision of, a certified operator or certified supervisor. The certified operator or certified supervisor shall hold certification in a class equal to, or greater than, the classification of the system or facility. The public water system, for certification classification purposes at Melrose Air Force Range, is designated as a “small water system.”

c. The contractor shall file the name(s) of the certified operator(s) and certified supervisor(s) with the New Mexico Environment Department (Department), Clovis Office. The contractor may replace a certified operator or certified supervisor with another certified operator or certified supervisor of the required particular class at any time, however, the contractor shall notify the Department in writing within ten (10) days after the replacement.

d. The contractor shall comply with the provisions of 20 NMAC 7.4.II.201, *Requirements for Certification*, for each applicant for certification as a public water supply system operator. However, the contractor shall employ at least one certified operator or certified supervisor at the beginning of the contract period(s).

e. The provisions of 20 NMAC 7.4.II.203, *Temporary Certification*, are not applicable. Temporary certifications will not be allowed under this contract.

3. Specific Requirements:

a. Tasks 1 - 5 in Table 1 shall be performed by, or under the direct supervision of, a certified operator or certified supervisor.

b. The contractor shall document accomplishment and results of tasks identified in Table 1. At a minimum, date of task accomplishment, result (e.g., chlorine residual data), and follow-up procedure, if applicable, shall be recorded. Records shall be made available to the Contracting Officer or Contracting Officer’s Representative, upon request.

4. Impassable Access to Well #13:

a. In the event weather conditions prevent safe access to well #13 or has the potential hamper vehicles, cause deep tire ruts, and/or damage vegetation, the contractor will be granted a waiver for conducting the general system check (Task 1 of Table 1) on well #13.

b. The contractor shall document the date and reason system check could not be performed. Records shall be made available to the Contracting Officer or Contracting Officer's Representative, upon request. The contractor shall resume daily system checks when conditions permit.

POINSETT BOMBING & GUNNERY RANGE ANNEX

SECTION C-1

1.2. CONTRACTOR PERSONNEL

1.2.6. EMPLOYEE TRAINING

1.2.6.1. The contractor shall establish and maintain an ongoing training program to ensure contractor personnel are current in their job knowledge. This program shall include, as a minimum; range safety, explosive ordnance disposal (EOD), waste management, aircraft crash procedures, first aid, security programs, tower and associated ordnance delivery scoring operations, day and night scoring proficiency, range maintenance, vehicle operation and range control officer (RCO) functions. Conduct and document initial and annual refresher safety and occupational hazards briefings IAW Occupational Safety and Health Act (OSHA). When Government assistance for specialized training is necessary, forward a request for training assistance to the Contracting Officer utilizing a DD Form 1556. Most AF schools are available at no tuition cost to the contractor.

1.2.6.2. When government assistance for specialized training is necessary, forward a request for training assistance to 20 OSS/OSTR.

1.2.6.3. The contractor Chief RCO will train and certify any government employee identified by the QAE as needing RCO training. Qualified individuals training records will be maintained with the contractor training records, or as designated by the QAE.

1.6. HOURS OF OPERATION

1.6.1. NORMAL HOURS OF OPERATION

The flying operation will be conducted on an advanced notice basis. While primary user is the 20th Fighter Wing, the range may be used by any active duty, reserve or National Guard unit. The contractor shall operate the range as a Class-A range fourteen and one half-hours per day, normally Monday through Thursday, from 0800-2230 and from 0800-1300 on Friday. Local range maintenance will begin at 1300 hours on Friday. Night operations (Monday through Thursday) are included in the above mentioned fourteen and one half-hours per day. Operational hours may be adjusted to accommodate changes in the flying schedule. These adjustments may not exceed the fourteen and one half-hours per day for normal operations. Extended operating hours may be required to accommodate exercises, surge, inspections or real time emergencies. Stipulated hours are exclusive of travel time to and from the range, as well as time required for range preparation and shutdown. The contractor shall provide the capability to perform overtime, when required by unscheduled flying operations. Occasionally unscheduled operation changes may cause operating periods to be extended or rescheduled to complete missions in progress or to accomplish high priority workloads. The contractor shall ensure that at least one person is available in the administrative office to answer the telephone, respond to requests, take messages, etc., at all times during daytime normal duty hours (0730 - 1630, Monday - Friday).

1.6.2. OUTSIDE OF NORMAL HOURS OF OPERATION

The contractor shall be prepared to support a maximum of 150 operational hours per year.

1.10. ENVIRONMENTAL AND CULTURAL RESTRICTIONS

1.10.1. The following activities are prohibited on the range: animal, plant and mineral collection; recreational off-road vehicle use not associated with official or authorized activities; and traffic flow through the range by the general public.

1.10.2. Authorized activities on the range include scientific research when approved, in writing, by 20CES/CEV and 20OSS/OSTR and any other activities approved by 20OSS/CC.

Authorized/approved activities shall be coordinated through the QAE prior to being started.

SECTION C-3

3.2. GOVERNMENT FURNISHED SERVICES:

3.2.1. GOVERNMENT FURNISHED UTILITIES

The government will provide electricity, water, heating and air conditioning.

3.2.1.1. BACK UP ELECTRICAL POWER

The government will provide and maintain a 30 KW generator

3.2.2. COMMUNICATIONS SERVICES

3.2.2.1. RADIOS

20 CS shall provide maintenance for air-to-ground radios, scoring equipment, and meteorological equipment (see TE 5 for list of equipment). Items listed in Technical Exhibit 5 will be provided for contractor utilization. Maintenance and repair will be accomplished by the Government. All requests for maintenance and repair shall be coordinated with 20CS workload control. The Government shall provide all hand-held single channel portable radios, chargers and batteries required to perform IAW this PWS. The Government shall provide at least one base station, 3 spare batteries and 3 battery chargers. Hand-held radios shall be made available to EOD personnel during range decontamination operations. Radios shall also be made available to government personnel when required for official business, i.e., aircraft crash/rescue, inspections, etc. All hand-held radios will transmit and receive on government directed frequencies. Call 20FW Communication Squadron job control when an outage occurs that requires maintenance and enter the outage, time of outage, and work order number in the RCO daily log. Job control shall be notified when outage has been corrected and an entry in the RCO log shall be made when job control is notified.

3.2.5. FIRE PROTECTION

The government shall provide fire protection. The Shaw AFB Fire Department will have one operational fire fighting vehicle and operator on duty at all times when the range is hot, when contractor is performing controlled burning, or EOD is destroying ordnance.

3.2.17. METEOROLOGICAL SERVICE

The government shall provide maintenance and repair on meteorological equipment. All requests for maintenance and repair shall be coordinated with 20CS workload control.

3.2.20. SCHEDULING

3.2.20.1. The 20th Operational Support Squadrons Scheduling Section (20OSS/OSOS) shall provide a copy of weekly schedule to the contractor not later than the close of business the Friday of the previous week. The contractor shall call 20OSS/OSOS via telephone each morning by 0800 to get daily schedule changes. Changes involving less lead-time will be telephonically submitted by 20OSS/OSOS as soon as possible to allow the contractor time for required preparatory actions.

3.2.20.2. Annual maintenance and clearance schedules will be developed by 20OSS/OST. These schedules will include time for recurring maintenance requirements included in AFI 13-212, Vol 2, SAFB Sup 1.

3.2.21. T-BAR LIGHTS

The government will provide and maintain the T-bar lights on the conventional circle target.

3.2.22. INSECT AND RODENT CONTROL

Shall be provided by the Entomology section of the 20th Civil Engineering Squadron after coordination through the QAE.

SECTION C-4

4.2. VEHICLES

The contractor shall ensure that at least one passenger type vehicle is available in the compound during aircraft operations so range personnel can respond to emergency requirements when necessary (i.e., strafe targets, transducers).

4.3. FIRST AID

Because of the absence of nearby medical facilities, the contractor shall ensure employees are trained to render first aid/CPR. Training should be equivalent to an American Red Cross Standard First Aid/CPR course in order to provide initial treatment for all personnel who are on the range. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. Supplies shall be replenished as necessary by the contractor.

4.4. REFUSE COLLECTION/DISPOSAL

Hazardous, non-hazardous and solid waste disposal is the responsibility of the contractor. Refuse receptacles will be furnished by the contractor. All hazardous, non-hazardous and solid waste disposal shall be IAW local, state and federal directives. Conduct and document initial and annual refresher safety and occupational hazards briefings IAW applicable directives. Hazardous waste shall not be disposed of on range property. Contractor shall contact 20CES/CEV for final disposition instructions.

4.5. POL

The contractor shall provide all fuels; lubricants, oil, and grease for contractor owned vehicles, power tools and government-furnished equipment.

4.6. TARGET BUILDING MATERIALS

The contractor shall provide all target building materials to include, but not be limited to, lumber, paint, nails, plywood, and telephone poles, required to perform range target maintenance and construction functions outlined in Section C-5.

4.7. PERSONNEL SAFETY EQUIPMENT

The contractor will provide all personnel safety equipment (except those listed in Technical Exhibit 5) to include, but not be limited to, hard hats, safety glasses, and ear protectors.

SECTION C-5

5.1.1. TOWER OPERATIONS

5.1.1.1. EQUIPMENT PROTECTION

Disconnect all electrical equipment, including radios prior to closing the tower each day and when operations are discontinued for inclement weather or lightning.

5.1.2. STRAFE PITS

Contractor personnel shall ensure strafe pits have a minimum of 12" depth of loose sand and are surface-cleared of spent projectiles and any other hazardous objects 3" in diameter or larger. The latter shall be accomplished by daily hand policing around the berms, top of the berms and all sand/earthen surfaces in an area 50 feet either side of the centerline and 75 feet in front of and 100 feet behind each strafe target. The Range Manager or Range Control Officer shall inspect the impact area(s) immediately after hand policing to ensure compliance. There are four (4) strafe targets, all located on the west side of the main tower. Each strafe target area is 100 feet wide and 1000 feet long, with target panel suspended from two near vertical poles located about 100 feet from the front of the strafe target area. A berm is located 5 to 6 feet in front of and centered on each strafe target panel vertical centerline.

The contractor shall disk plow or chisel plow each strafe impact area (100 x 1000 feet) at least weekly to maintain loose sand at least 12 inches deep. The area shall then be swept with an electromagnetic sweeper to remove subsurface debris (**NOTE: Other types of accessible area equipment may be used after approval is granted by the Range Operations Officer**).

Additionally, each day prior to the start of the first range period, the area 75 feet in front of the target and 100 feet behind the target, including 50 feet on either side of the center line and the areas around the berms and tops of the berms shall be hand-policed. The contractor shall replace shot-down or unserviceable strafe poles within one working day. Strafe panels shot down or blown down by wind shall be replaced as soon as flying permits. The strafe poles (telephone poles) are 30 feet above ground level, with 6 feet below ground level, with the top of the poles leaning back at a 10-degree angle. Procurement of the poles is the responsibility of the contractor.

5.1.1.2. SCORING SYSTEMS INSPECTION

5.1.2.1.1. Contractor personnel shall erect strafe panels prior to the first available range period.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain, repair, or reconstruct the strafe targets and pits IAW Technical Exhibit 3. The contractor shall plow each strafe impact area (500 x 1000 ft) weekly or every 6 strafe days to maintain loose soil to at least 12 inches deep. The area will then be swept with a magnetic device to remove surface debris.

5.2.1.1.2. The contractor shall, prior to the start of the first range period, police (pick up and remove) the strafe pit area 75 feet in front of the target to 100 feet behind the target, including 50 feet either side of the centerline, and the berms. All rocks 3 inches in diameter or greater, spent projectiles, and other hazardous debris shall be removed.

5.2.1.1.3. The contractor shall fill strafe impact areas with sand or loose soil as required to maintain the minimum of 12-inch depth or provide a level surface to prevent water from pooling

5.2.1.1.4. The contractor shall construct, maintain or repair strafe berms when required. A solid earthen berm will be constructed to protect the acousticscore transducers. (See Technical Exhibit 3)

5.2.1.1.5. The contractor shall replace shot-down or unserviceable strafe poles and anchor posts within 8 hours of becoming unserviceable. The strafe poles (telephone poles) are 35' long. When in the ground, 30 feet will extend above ground level with the top of the poles leaning back at a 10-degree angle. (See Technical Exhibit 3)

5.2.1.1.6. The contractor shall replace unserviceable strafe target panels (salvaged drag chutes), suspension cables, and take-up reels.

5.2.1.1.7. The contractor shall maintain the 4 lead-in lines for the strafe targets. These lead-in lines extend down range from the approach end of the strafe pit and are approximately 2,000 feet long and 12-18 feet wide. The lines shall be disked, as needed, to remove vegetation and debris.

5.2.1.1.8. The contractor shall maintain the foul lines on west side of the main tower (see Technical Exhibit 3). Tires will be painted as needed.

5.2.1.1.9. The contractor shall build and paint strafe panels as required, to replace unserviceable panels. (See Technical Exhibit 3 for design.)

5.2.1.2. HIGH ANGLE STRAFE TARGET

5.2.1.2.1. The contractor shall maintain target vehicles for a high angle target. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement. The contractor shall repaint the vehicle as often as needed to make the target visible to aircraft.

5.2.1.3. CONVENTIONAL BOMB CIRCLE

5.2.1.3.1. The contractor shall maintain on conventional circle, two concentric circles comprised of adjacently spaced painted aircraft tires, or suitable substitute, having radius of 23 meters (75 feet) and 46 meters (150 feet). Contractors shall repaint the tires as often as needed to make the circles visible to aircraft.

5.2.1.3.2. The contractor shall maintain in the center of the conventional circle a target vehicle. The target vehicle shall be replaced when the target vehicle no longer has a recognizable silhouette or when form is grossly distorted and cannot be fixed with minor repair. The rate of ordnance delivery and resultant damage to the target vehicle dictates the rate of replacement.

5.2.1.3.3. The contractor shall during the quarterly clearance/maintenance operation remove the tires and disk, or blade the area within a 300-foot radius to smooth the surface and remove all vegetation. Tires will be replaced upon completion. The contractor shall keep the bomb circle filled with dirt as required to keep water from pooling.

5.2.1.4. TACTICAL TARGETS

There are nine (9) tactical targets on the range, three located west of the conventional circle target and six at the southern target array. The contractor shall use soft targets. QAE shall inspect the tactical targets monthly, as a minimum, to determine repair (including painting) and replacement requirements. Replacement criteria are as follows: Targets that are unidentifiable because of grossly distorted silhouette shall be replaced, unless repair is feasible and more economical. Minor distortions in tactical target silhouettes shall require repair within 5 workdays of receipt of written notice from QAE.

5.2.3.1. REAL PROPERTY AND CAPITAL EQUIPMENT MAINTENANCE

5.2.3.1.1. ROADS MAINTENANCE

For the purpose of this contract the terms "Roads and firebreaks" are synonymous. Install and maintain, as required, all government furnished USAF range signs, flags, poles and other warning, safety, hazard, informational and security devices. Major repair and maintenance such as resurfacing, filling/leveling of strafe and conventional target access roads shall be the responsibility of the contractor. Contractor shall ensure all roads and firebreaks remain passable at all times in order to allow fire/crash equipment access to any portion of the range. Any obstacle blocking a road or firebreak shall be removed as soon as possible after discovery, but in no case shall a road/firebreak remain blocked for more than 12 hours after discovery. Contractor shall disk all roads and firebreaks every six months or as often as necessary to prevent the

growth of vegetation. Roads and firebreaks may be graded or disked. Contractor shall ensure all roads and firebreaks are at least 10 feet wide and all foliage along the edges shall be kept cut to a height of 10 feet to prevent damage to personnel and equipment.

SAYLOR CREEK BOMBING & GUNNERY RANGE ANNEX

SECTION C-1

1.6. HOURS OF OPERATION

1.6.1. Normal Hours Of Operation

The contractor shall perform the services required under this contract during the following hours. The contractor shall normally provide up to twelve (12) operational hours per day Monday through Friday each week. Flying operational hours will be conducted on an advance notice basis. Scheduled operational flights will be serviced/controlled by the contractor during daylight hours (1/2 hour prior to official sunrise until 1/2 hour after official sunset) based on the flying schedule with updates as made the day prior to the day of scheduled operations. Extended operational hours (an additional 20 hours per month) are required to accomplish priority mission requirements. These extended hours may extend a workday or support required weekend service. Work required beyond 12 hours per day plus the 20 hours of extended service is subject to overtime compensation. Annual Class-A night operations include approximately 128 hours to support A-10 operations. These hours are generally scheduled within the normal 12-hour window, except for weekend service. Stipulated hours are exclusive of travel time to and from the range as well as time required for range preparation and shutdown.

1.6.2. Outside Normal Hours of Operation

The contractor shall be prepared to support 50 operational hours per year.

1.10. ENVIRONMENTAL AND CULTURAL RESTRICTIONS

1.10.1. Natural Resources Protection

Contractor employees will be familiar with the natural and cultural resources present on Saylor Creek Air Force Range. Contractor will maintain and comply with the Saylor Creek Land Management Plan, Cultural Resources Plan, and Fish and Wildlife Plan. Contractor will ensure maintenance operations do not adversely affect natural or cultural resources.

SECTION C-3

3.2. GOVERNMENT FURNISHED SERVICES

3.2.1. GOVERNMENT FURNISHED UTILITIES

3.2.1.1. Water System

The government will provide the water system on the range. The system supports the main building to supply kitchen, bathroom facility and drinking fountain through a chlorinating system. The contractor shall procure and transport potable water as needed and provide the Air Force with water samples for inspection as directed by the base Bio Environmental office.

3.2.1.2. Fuel Storage System

Three above ground fuel tanks are located west of building 61. Tanks are within a concrete berm for diesel and mogas storage.

3.2.1.3. Propane

The government will furnish propane; the contractor shall contact the Civil Engineering Financial Management office to obtain propane.

3.2.20. SCHEDULES

3.2.20.1. The government will provide ordnance-clearing schedules IAW AFI 13-212, local supplement.

3.2.20.2. The government will provide weekly operations schedules no later than close of business of the proceeding Friday.

SECTION C-4

4.2. FIRST AID

4.2.1. Due to the absence of medical facilities, the contractor will ensure all employees are trained to render first aid and CPR in order to provide initial treatment for all personnel who are on the range. Contractor may obtain the training through the Red Cross office or by military personnel if the capability exists within the operations group training office. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. A monthly inspection shall be made of all first aid materials, which shall be replenished as necessary.

4.3. FIRE PROTECTION/FIGHTING

4.3.1. The contractor shall supply fire suppression service and equipment on the 13,000-acre impact area of Saylor Creek AF Range. In case of fire, the range will be closed immediately and remain closed until fire fighting operations are terminated. This is especially critical during the fire threat season (normally 1 June - 15 October) each year. To minimize the risk of fire, the contractor shall, in accordance with local procedures and paragraph 4.3.16 to this PWS annex, conduct controlled burns. After the impact area has been control burned (excluding the Southwest corner), the contractor may reduce fire suppression support with the approval of the QAE and the base fire chief.

4.3.2. Training

All contractor personnel working on the range will be trained on fire fighting techniques.

4.3.3. During the fire threat season, the contractor will maintain the capability to compute a burn index daily at the range. The contractor will only have to compute a burn index if the computer at the Bureau of Land Management (BLM) in Boise becomes inoperative. The burn index will be given to the Base Fire Department prior to the first scheduled mission and as requested

throughout the range operational hours. Procedures for computing the burn index will be provided by 366 OG/OSTW.

4.3.4. The contractor shall maintain a seasonal fire response capability at the range during all air-to-ground ordnance delivery operations. This capability shall, as a minimum, be large enough to fight fires utilizing simultaneously with the seasonal minimum equipment listed below in 4.3.12. Average length of daily flying operations is about 12 hours.

4.3.5. The contractor shall provide fire protection approximately two weekends per month to support munitions delivery. This service is considered in the 20 hours of extended service as defined in paragraph 1.6.1.

4.3.6. During fire threat season, the contractor shall delay range departure for 30 minutes past the end of the last range fire or smoke charged ordnance delivery to ensure no fires start.

4.3.7. The contractor shall also maintain a contingency capability to be recalled to support fighting range fires after duty hours by providing individual names and phone numbers of contract personnel to command post through the QAE.

4.3.8. Fire Guard

The contractor will man the tower with a person to act as fireguard whenever munitions are being delivered during the fire threat season. The RCO may perform fireguard duties when manning the tower. When reporting for duty the fireguard will inform the Command Post the tower is manned. The fireguard will review the flight schedule to ensure that the tower is manned. The Command Post will inform the fireguard of any changes, deletions, or additions to the printed flying schedule.

4.3.8.1. The fire guard/RCO will be required to operate UHF radios when telephones are inoperative.

4.3.8.2. If for any reason the fire guard/RCO must leave the tower, the Command Post will be notified when departing and upon return.

4.3.9. When observing a fire on or near the range the fire guard/RCO will:

- Notify the range crew of the approximate location of the fire.
- Notify the Command Post via hot line of fire location and request aircraft depart the range.
- Inform Command Post when fire has been extinguished and all range crew personnel are clear of active target area.

4.3.9.1. If the range crew requests assistance from the Bureau of Land Management (BLM) or base support agencies, the fire guard/RCO will relay this request through the Command Post.

4.3.9.2. In the absence of the RCO (during Class B Operations), the fireguard, in the event of an aircraft crash on or near Saylor Creek AF Range shall notify the Command Post to give them approximate location.

4.3.10. Response

Upon notification of a fire on the range, contractor personnel shall respond immediately. Every effort will be made to contain all fires within the fenced perimeter of the range.

4.3.11. Historical Data

Historically, minimum primary operational fire fighting equipment during the fire threat season has consisted of one 256HP farm tractor with a 20/25 foot offset disc or unit of comparable size and one pumper/tanker truck with a minimum 500 gallon water capacity capable of pumping at least 60 gallons per minute (gpm) and two (1) ton 4X4 trucks with 250-gallon slip-on units. Backup fire fighting equipment has consisted of one bulldozer/road grader and an additional pumper/tanker truck or trailer with a minimum 500-gallon capacity and a 3000-gallon tanker for water storage. Contractor will also maintain the water level in the 10,000-gallon water tanker at the main complex for use by DoD and state agencies for training and fire suppression.

4.3.12. Minimal Fire fighting Equipment

During non-fire threat season (normally 16 Oct - 31 May), minimal fire fighting equipment has historically consisted of one 256HP tractor with a 20 foot offset disc, bulldozer or road grader, and one pumper/tanker with a 500 gallon water capacity capable of pumping at least 60 gpm, or one quick response 1 ton 4X4 truck with a 250-gallon slip-on unit capable of pumping 60 gpm. A second 4x4-(1) ton quick response vehicle has been used as a back up only.

4.3.13. Equipment Availability

If fire suppression/fighting equipment is not present and operational on the range during the fire season, no ordnance deliveries may be made on the range. This constitutes range closure. However, during the non-fire season, the decision to close the range will be made by the RCO after consultation with the QAE or Base Contracting Officer.

4.3.14. Support

The contractor shall collect, transport, and store water supplies sufficient to maintain a minimum of 13,000 gallons on hand during fire threat season. The nearest water source is 16 miles from the range. The Air Force has provided a 10,000-gallon tank for fire suppression and training on range, and the contractor is responsible for maintaining the water level full during the fire season. The tank will be available for joint use by the contractor and the government for training and actual firefighting.

4.3.15. Assistance

If the contractor is unable to control and extinguish the fire(s) or determines that outside assistance is required, he will implement the Range Fire Fighting Plan (CESR 92-3) and continue to fight the fire(s). Upon arrival of BLM forces or assistance from MHAFB Fire Department, the contractor will yield control of the fire fighting effort to BLM or senior fire official, and provide assistance.

4.3.16. Controlled Burns

As a preventive fire suppression measure, controlled burns shall be accomplished by the contractor on the range impact area in the state of Idaho. This should be accomplished prior to,

or early into, the fire season when safety and conditions (winds, vegetation growth/dryness, etc.) permit. The contractor shall coordinate with the Base Fire Chief and BLM prior to accomplishing a controlled burn. The burn should be planned so as not to interfere with flying operations. All firebreaks must be established and minimal specified fire fighting equipment shall be operational and strategically positioned as determined by the contractor before accomplishing any controlled burn.

SECTION C-5

5.1. OPERATIONS

5.1.5. SCORING SYSTEM OPERATIONS

See PWS C-5, Ch 2 Appendix 2.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.1. LOW ANGLE STRAFE TARGETS

5.2.1.1.1. The contractor shall maintain the strafe targets, berms, and strafe beds as specified in AFI 13-212. Contractor shall provide year round service for strafe on the east side, turning the soil through out the winter months to maintain a loose soil depth of 12 inches, hand policing as required, closing only for maintenance and or repairs. The West Side shall remain closed during the winter months unless weather will allow it to be opened.

5.2.1.1.2. The contractor shall operate and maintain the DA-3/H Acoustiscore system.

5.2.1.1.3. Drag chutes/MA1A webbing for strafe pits can be obtained from the QAE through DRMO as needed. The contractor will furnish all other materials, except Acoustiscore equipment.

5.2.1.4. HIGH ANGLE STRAFE TARGET

5.2.1.4.1. The contractor shall maintain contract vehicles for high angle strafe. The target vehicle will be replaced when the target vehicle no longer has a recognizable silhouette or whose form is grossly distorted and cannot be fixed with minor repair. The rate of replacement is dictated by the use of the target. Historically approximately five targets are pulled and replaced annually. The contractor will repaint the targets as replaced and annually or sooner as determined by the QAE. (See Technical Exhibit 3)

5.2.1.5. TACTICAL TARGETS

5.2.1.5.1. The contractor shall repair or replace target vehicles, aircraft targets etc. as determined by the QAE. Targets, which are unidentifiable because of grossly distorted silhouettes, shall be replace with like models or suitable substitutes if available.

5.2.1.6. REFLECTORS

5.2.1.6.1. The contractor shall maintain/repair all reflectors located on the range proper.

5.2.1.7. INFRARED (IR) TARGETS (WITH HEAT KITS)

The contractor shall operate, maintain, and repair IR targets on Saylor Creek AF Range IAW FUJI instruction manuals and technical data as supplied by the government. All other IR targets will be maintained as to project the IR image they are designed for.

5.2.1.8. EARTH/EARTH-FILLED TARGETS

5.2.1.8.1. The contractor shall rebuild all earthen target facilities to their original configuration to maintain and control erosion and vegetation.

5.2.1.9. TOSS OPERATION AND MAINTENANCE

See PWS C-5, Ch 2 Appendix 2.

5.2.2. RANGE DECONTAMINATION AND CLEARANCE

5.2.2.1. Scheduled range decontamination periods will be conducted on a bi-weekly and annual basis to include the removal and/or disposal of all munitions residue IAW AFI 13-212. The collection/removal of munitions residue, which EOD personnel have inspected and certified to be free of explosive material, shall be accomplished by contractor personnel under EOD supervision provided they have received an EOD briefing and a briefing statement is on file. Contractor personnel shall perform range decontamination in the target areas during the range closure periods. Range sanitation shall be conducted annually, dates to be selected during the Base Annual Range Board meeting. Contractor personnel will pick up EOD explosive free cleared munitions, transport and bury at designated burial sites **except** for sub-scale munitions which will be cleared and put in munitions bins by EOD personnel to ensure proper clearance certification for recycling under a contract through DRMO. Contractor personnel will receive this briefing upon initial assignment and at least annually thereafter. The EOD briefing will be provided prior to commencement of decontamination operations. Briefing certificates will be retained for one year.

5.2.2.3. Ordnance Residue Burial Sites

The contractor shall inspect, replace, and/or install warning signs/markers periodically around the pit. Maintain burial pit markers/warning signs at all approaches and on both sides of the outer perimeter of the pit IAW the Idaho State Permit.

5.2.2.3.1. Maintain the capability to excavate 1-2 burial pits yearly following survey and stakeout by Civil Engineering. Each pit shall be a slit trench approximately 20-feet wide by 100-feet long and 16-feet deep prepared to receive expended munitions residue.

5.2.2.3.2. Backfill exposed residue material shall be IAW the Idaho State permit requirements.

5.2.3. REAL PROPERTY

5.2.3.1.1. Road Maintenance

The contractor shall maintain approximately 30 miles of existing dirt and gravel roads on and to the range in serviceable condition. These roads include an approximately 2 1/4 miles access road from the county maintained Clover Creek Road to the main access gate west of the impact area. All roads shall be maintained in a built-up, well-drained graded condition and include snow removal for year round access.

5.2.3.1.2. PAVEMENTS AND GROUNDS

5.2.3.1.2.1. The only paved surface on the range is the helicopter pad consisting of asphalt. The contractor shall maintain the asphalt by patching or other suitable means when potholes, deep cracks, or crumbling occur. The contractor shall paint the standard helicopter pad markings annually or more frequently if directed by the QAE based upon safety-of-flight considerations. Contractor shall maintain helicopter-grounding points. 366 Civil Engineering Squadron will complete certification of grounding points. Contractor shall ensure windsocks are changed as needed, at government expense.

5.2.3.1.2.2. The contractor shall maintain the grounds within 50 feet of the range facilities in a neat and presentable fashion. Landscaping may be accomplished at the contractor's discretion using the natural desert motif as a basis.

5.2.3.1.2.3. There are five range access gates. The gates are of chain-like construction and secured by a keyed padlock with lengths of four-strand barbed wire fence extending beyond either gatepost. The contractor shall repair the gates and associated fence as required to ensure a viable impediment to unauthorized vehicular and grazing stock access.

5.2.3.1.3. FIREBREAKS

The contractor shall totally clear all firebreaks, by the end of May each year, to mineral soil in accordance with Technical Exhibit 6 and maintain them in a functional status throughout the fire threat season (normally 1 June through 15 October). The QAE and a fire department representative will jointly evaluate firebreak conditions each month during fire prevention inspections throughout the fire season. Mineral soil is defined as cleared dirt/earth without flammable vegetation or fuel showing. This soil eliminates "step fuel," further reducing the likelihood of fire spreading.

5.2.3.1.3.1. PERIMETER FIREBREAKS

Consist of approximately 20 - 25 miles of cleared area 100 - 120 feet wide around the perimeter to include both run in lines south of the impact area and firebreaks on either side of the entry road west from Castle Creek Road to the west entry gate.

Note: Only the south side of the entry way from Castleford road to the large culvert west of the main gate has to be worked as a firebreak due to phone and power lines on the north side. The rest of the way has to be cut as a firebreak on both sides of the entry road.

5.2.3.1.3.2. INTERIOR FIREBREAKS

Consist of about 45 miles of cleared area 40 - 50 feet wide crisscrossing target complexes to include firebreaks around 8 - 10 Electronic Combat (EC) sites and camera towers inside the impact area. Run in line East, serving as secondary firebreak, will be cleared up to the east conventional target circles and the run in line West will be cleared up to the fence line South of the restoration study area by the end of May also.

5.2.3.1.3.3. FENCES

The contractor shall be responsible for any repair of the range perimeter fencing. Present fencing consists of four- (4) strand barbed wire mounted or affixed to standard metal posts at a height of four (4) feet. There are five (5) each metal stock gates located within the range perimeter fencing, mounted on six (6) inch diameter uprights. Total length of the perimeter fencing is 20 - 25 miles. During repairs, the Government will provide all repair/replacement materials and the contractor shall be responsible for tools and equipment.

5.2.3.1.3.4. ZIG-ZAGS

The contractor shall be responsible for maintaining the 40-foot wide zigzag from the main complex to the south firebreak in a cleared condition.

5.3. REFUSE COLLECTION

The contractor shall empty all waste and remove all trash and paper, debris, etc. from all contractor facilities and deposit in collection facilities provided for this purpose. This will be disposed of once per week or more often as required.

5.3.1. Petroleum Waste

Contractor will maintain a waste petroleum accumulation area. Contractor will ensure requirements of 40 CFR 112.7 are met, to include maintaining absorbent materials and spill clean up equipment. Care will be taken during fill and transfer operations to prevent environmental contamination. Contractor will be responsible for transporting used oil to the base for disposal through CEV. Empty drums will be stored upside down to prevent accumulation of precipitation. Contractor is responsible for spill containment.

5.3.2. Main Complex

The contractor shall maintain the area around the main complex in a neat and orderly manner. The area consists of an equipment parking area, a helipad, loading dock, fuels and supplies storage areas, and adjacent grounds and facilities.

5.3.2.1. The areas adjacent to contractor utilized facilities will be vegetation free, level and in good repair up to 50 feet of each facility on range and 20 feet for the TOSS facilities on base.

JUNIPER BUTTE BOMBING RANGE ANNEX

SECTION C-1

1.2. CONTRACT PERSONNEL

1.2.2. Site Manager

The site manager or alternate shall be available during normal duty hours and within 60 minutes to meet on the installation with government personnel (designated by the contracting officer) to discuss problem areas. After normal duty hours the site manager or alternate shall be available within 2 hours.

1.6. HOURS OF OPERATION

1.6.1. Normal Hours of Operation

The contractor shall perform the services required under this contract during the following hours under Class B operations. The contractor shall normally provide under the umbrella of a floating schedule up to twelve (12) operational hours per day Monday through Friday each week. Flying operational hours will be conducted on an advance notice basis. Scheduled operational flights will be serviced/controlled by the contractor during daylight hours (1/2 hour prior to official sunrise until 1/2 hour after official sunset) based on the flying schedule with updates as made the day prior to the day of scheduled operations. Extended operational hours (an additional 20 hours per month) are required to accomplish priority mission requirements. These extended hours may extend a workday or support required weekend service. Work required beyond 12 hours per day plus the 20 hours of extended service is subject to overtime compensation. Stipulated hours are exclusive of travel time to and from the range as well as time required for range preparation and shutdown.

1.6.2. Outside Normal Hours of Operation

The contractor shall be prepared to support a maximum of 50 hours per fiscal year.

1.10. ENVIRONMENTAL AND CULTURAL RESTRICTIONS

1.10.1. Natural Resources Protection

Contractor employees will be familiar with the natural and cultural resources present on Saylor Creek Air Force Range. Contractor will maintain and comply with the Saylor Creek Land Management Plan, Cultural Resources Plan, and Fish and Wildlife Plan. Contractor will ensure maintenance operations do not adversely affect natural or cultural resources.

SECTION C-3

3.2. GOVERNMENT FURNISHED SERVICES

3.2.1. GOVERNMENT FURNISHED UTILITIES

3.2.1.1. Water System

The government will provide the water system on the range. The system supports the main building to supply kitchen, bathroom facility and drinking fountain through a chlorinating system. The contractor shall procure and transport potable water as needed and provide the Air Force with water samples for inspection as directed by the base Bio Environmental office.

3.2.1.2. Fuel Storage System

Government provided fuel containment area, bermed with double wall tanks.

3.2.1.3. Propane

The government will furnish propane; the contractor shall contact the Civil Engineering Financial Management office to obtain propane.

3.2.20. SCHEDULES

3.2.20.1. The government will provide ordnance-clearing schedules IAW AFI 13-212, local supplement.

3.2.20.2. The government will provide weekly operations schedules no later than close of business of the proceeding Friday.

SECTION C-4

4.2. FIRST AID

4.2.1. Due to the absence of medical facilities, the contractor will ensure all employees are trained to render first aid and CPR in order to provide initial treatment for all personnel who are on the range. Contractor may obtain the training through the Red Cross office or by military personnel if the capability exists within the operations group training office. Contractor shall provide adequate first aid materials. Materials shall be kept in a sanitary and usable condition. A monthly inspection shall be made of all first aid materials, which shall be replenished as necessary.

4.3. FIRE PROTECTION/FIGHTING

4.3.1. The contractor shall supply fire suppression service and equipment on the 12,000-acre impact area of Juniper Butte Bombing Range. In case of fire, the range will be closed immediately and remain closed until fire fighting operations are terminated. This is especially critical during the fire threat season (normally 1 June - 15 October) each year.

4.3.2. Training

All contractor personnel working on the range will be trained on fire fighting techniques and provide and maintain certification of annual training

4.3.3. During the fire threat season, the contractor will maintain the capability to compute a burn index daily at the range. The contractor will only have to compute a burn index if the computer

at the Bureau of Land Management (BLM) in Boise becomes inoperative. The burn index will be given to the Base Fire Department prior to the first scheduled mission and as requested throughout the range operational hours. Procedures for computing the burn index will be provided by 366 OG/OSTW.

4.3.4. The contractor shall maintain a seasonal fire response capability at the range during all air-to-ground ordnance delivery operations. This capability shall, as a minimum, be large enough to fight fires utilizing simultaneously with the seasonal minimum equipment listed below in 4.3.12. The required fire response capability is governed by the "Support Agreement between the 366th Wing, Mt. Home AFB, ID and the US Department of Interior, Snake River Ecosystem Base District Office. The types and quantity of fire suppression equipment will be the same as for Saylor Creek with the exception of the water supply tanker as the contractor will be responsible for maintaining the 50,000 water tank system located at the Juniper Butte maintenance facility. Average length of daily flying operations is about 12 hours.

4.3.5. The contractor shall provide fire protection approximately two weekends per month to support munitions delivery. This service is considered in the 20 hours of extended service as defined in paragraph 1.6.1.

4.3.6. During fire threat season, the contractor shall delay range departure for 30 minutes past the end of the last range fire or smoke charged ordnance delivery to ensure no fires start.

4.3.7. The contractor shall also maintain a contingency capability to be recalled to support fighting range fires after duty hours by providing individual names and phone numbers of contract personnel to command post through the QAE.

4.3.8. Fire Guard

The contractor will man the main complex with a person to act as fireguard /observer whenever munitions are being delivered during the fire threat season. The majority of flight operations will use the range for Class B operations. When reporting for duty the fireguard will inform the Command Post the complex is manned. The fireguard/observer will review the flight schedule to ensure that the complex is manned. The Command Post will inform the fireguard of any changes, deletions, or additions to the printed flying schedule.

4.3.8.1. The fire guard/observer will be required to operate FM radios when telephones are inoperative.

4.3.8.2. If for any reason the fire guard/observer must leave the complex, the Command Post will be notified when departing and upon return.

4.9. When observing a fire on or near the range the fire guard/observer will:

- Notify the range crew of the approximate location of the fire.
- Notify the Command Post via hot line of fire location and request aircraft depart the range.
- Inform Command Post when fire has been extinguished and all range crew personnel are clear of active target area.

- If the range crew requests assistance from the Bureau of Land Management (BLM) or base support agencies, the fire guard/observer will relay this request through the Command Post.
- The Juniper Butte fireguard/observer (or Saylor Creek RCO), in the event of an aircraft crash on or near Juniper Butte Range or Saylor Creek AF Range, shall notify the Command Post to give them approximate location.

4.3.10. Response

Upon notification of a fire on the range, contractor personnel shall respond immediately. Every effort will be made to contain all fires within the fenced perimeter of the range.

4.3.11. Historical Data

Historically, on Saylor Creek Air Force Range minimum primary operational fire fighting equipment during the fire threat season has consisted of one 256HP farm tractor with a 20/25 foot offset disc or unit of comparable size and one pumper/tanker truck with a minimum 500 gallon water capacity capable of pumping at least 60 gallons per minute (gpm) and two (1) ton 4X4 trucks with 250-gallon slip-on units. Backup fire fighting equipment has consisted of one bulldozer/road grader and an additional pumper/tanker truck or trailer with a minimum 500-gallon capacity.

4.3.12. Minimal Fire Fighting Equipment

During non-fire threat season (normally 16 Oct - 31 May), minimal fire fighting equipment has historically consisted of one 256HP tractor with a 20 foot offset disc, bulldozer or road grader, and one pumper/tanker with a 500-gallon water capacity capable of pumping at least 60 gpm, or one quick response 1 ton 4X4 truck with a 250-gallon slip-on unit capable of pumping 60 gpm. A second 4x4-(1) ton quick response vehicle has been used as a back up only.

4.3.13. Equipment Availability

If fire suppression/fighting equipment is not present and operational on the range during the fire season, no ordnance deliveries may be made on the range. This constitutes range closure. However, during the non-fire season, the decision to close the range will be made by the RCO after consultation with the QAE or Base Contracting Officer.

4.3.14. Support

The contractor shall collect, transport, and store water supplies sufficient to maintain the 50,000 gallon tank level and required levels of water in his support equipment on hand during fire threat season. The nearest water source is 16 miles from the range. The Air Force has provided a 50,000-gallon tank for fire suppression and training on range, and the contractor is responsible for maintaining the water level full during the fire season. The tank will be available for joint use by the contractor and the government for training and actual fire fighting.

4.3.15. Assistance

If the contractor is unable to control and extinguish the fire(s) or determines that outside assistance is required, he will implement the Range Fire Fighting Plan (CESR 92-3) and continue to fight the fire(s). Upon arrival of BLM forces or assistance from MHAFB Fire Department, the contractor will yield control of the fire fighting effort to BLM or senior fire official, and provide assistance.

SECTION C-5

5.1. OPERATIONS

5.1.5. SCORING SYSTEM OPERATIONS

See Appendix 2 to PWS C-5, Chapter 2.

5.2. MAINTENANCE

5.2.1. TARGET MAINTENANCE

5.2.1.5. TACTICAL TARGETS

5.2.1.5.1. The contractor shall repair or replace target vehicles, aircraft targets etc. as determined by the QAE. Targets, which are unidentifiable because of grossly distorted silhouettes, shall be replace with like models or suitable substitutes if available.

5.2.1.6. REFLECTORS

5.2.1.6.1. The contractor shall maintain/repair all reflectors if required on the range.

5.2.1.7. INFRARED (IR) TARGETS (WITH HEAT KITS)

The contractor shall operate, maintain, and repair IR targets on Juniper Butte Range IAW manuals and technical data as supplied by the government. All other IR targets will be maintained as to project the IR image they are designed for.

5.2.1.8. INDUSTRIAL STRUCTURE MAINTENANCE

Contractor will provide equipment, tools maintenance and repair of all industrial structures within the 300-acre impact area. Government will provide the materials for repairs/replacement.

5.2.1.9. SCORING SYSTEM MAINTENANCE

See Appendix 2 to PWS C-5, Chapter 2.

5.2.2. RANGE DECONTAMINATION AND CLEARANCE

5.2.2.1. Scheduled range decontamination periods will be conducted on a bi-weekly and annual basis to include the removal and/or disposal of all munitions residue IAW AFI 13-212. The collection/removal of munitions residue, which EOD personnel have inspected and certified to be free of explosive material, shall be accomplished by contractor personnel under EOD supervision provided they have received an EOD briefing and a briefing statement is on file. Contractor personnel shall perform range decontamination in the target areas during the range closure periods. Range sanitation shall be conducted annually, dates to be selected during the Base Annual Range Board meeting. Contractor personnel will pick up EOD explosive free cleared munitions, transport subscale munitions which will be cleared and put in lockable munitions bins to ensure proper clearance certification by EOD personnel for recycling.

Contractor personnel will receive EOD briefings upon initial assignment and at least annually thereafter. The EOD briefing will be provided prior to commencement of decontamination operations. Briefing certificates will be retained for one year.

5.2.3. REAL PROPERTY

5.2.3.1.1. Road Maintenance

The contractor shall maintain approximately 30 miles of existing dirt and gravel roads within the 12000-acre complex in serviceable condition. All roads shall be maintained in a built-up, well drained graded condition and include snow removal for year round access.

5.2.3.1.2. PAVEMENTS AND GROUNDS

5.2.3.1.2.1. The only paved surface on the range is the helicopter pad consisting of asphalt. The contractor shall maintain the asphalt by patching or other suitable means when potholes, deep cracks, or crumbling occur. The contractor shall paint the standard helicopter pad markings annually or more frequently if directed by the QAE based upon safety-of-flight considerations. Contractor shall maintain helicopter-grounding points. 366 Civil Engineering Squadron will complete certification of grounding points. Contractor shall ensure windsocks are changed as needed, at government expense.

5.2.3.1.2.2. The contractor shall maintain the grounds within 50 feet of the range facilities in a neat and presentable fashion.

5.2.3.1.2.3. The contractor shall maintain and repair the gates and associated fence as required to ensure a viable impediment to unauthorized vehicular and grazing stock access.

5.2.3.1.3.3. FENCES

The contractor shall be responsible for any repair of the range perimeter fencing. Present fencing consists of four 3-strand barbed wire and 1 non barbed wire mounted or affixed to standard metal posts at a height of four (4) feet. There are four (4) each metal stock gates located within the range perimeter fencing, mounted on six (6) inch diameter uprights. Total length of the perimeter fencing is 20 - 25 miles. During repairs, the Government will provide all repair/replacement materials and the contractor shall be responsible for tools and equipment.

5.3. REFUSE COLLECTION

The contractor shall empty all waste and remove all trash and paper, debris, etc. from all contractor facilities and deposit in collection facilities provided for this purpose. This will be disposed of once per week or more often as required.

5.3.1. Petroleum Waste

Contractor will maintain a waste petroleum accumulation area. Contractor will ensure requirements of 40 CFR 112.7 are met, to include maintaining absorbent materials and spill clean up equipment. Care will be taken during fill and transfer operations to prevent environmental contamination. Contractor will be responsible for transporting used oil to the base for disposal

through CEV. Approved government containers will be provided for collection and transport. Contractor is responsible for spill containment.

5.3.2. Main Complex

The contractor shall maintain the area around the main complex in a neat and orderly manner. The area consists of fencing, gates, equipment, parking area, a helipad, loading dock, fuels and supplies, storage areas, and adjacent grounds and facilities.

5.3.2.1. The areas adjacent to contractor utilized facilities will be vegetation free, level and in good repair up to 50 feet of each facility on range.

APPENDIX 1 to PWS C-5, Chapter 2 RANGE CONTROL OFFICER (RCO) OPERATIONS (ALL B&G RANGES)

1. CONCEPT OF OPERATIONS

1.1. Range Control Officer (RCO)

The contractor shall provide a minimum of three qualified RCOs. The contractor shall ensure at least one qualified RCO is on duty in the main tower during all flight operations at least 30 minutes before the start of any scheduled flight activity. Contractor personnel shall not perform any duty concurrent with RCO duty. The QAE will monitor RCO activities and performance and train personnel as required.

1.2. The contractor will designate an RCO project manager who is charged with the total responsibility for the mission success of the contracted RCO program. He/she possesses the on-site authority to use all resources in a manner that will assure that each mission parameter is accomplished in an efficient and cost effective manner.

1.3. RCO Responsibilities

The RCO shall be responsible for the control of all flight and ground operations whenever aircraft operations are being conducted. The primary responsibility of the RCO is control of range operations in accordance with all applicable regulations, and to prevent or eliminate unsafe practices through close supervision of range operational missions and related ground support. The control responsibility and authority of the RCO does not assume final authority and responsibilities of the Aircraft Commander or Flight Lead for aircraft operations except when operations repeatedly violate standard procedures or create a dangerous situation. The RCO must be continually aware of the requirement for effective and efficient mission accomplishment within the confines of flying and ground safety and range capabilities. Regulations cannot cover all possible restrictions and limitations. RCOs must use good judgment and common sense while controlling aircraft.

1.4. To ensure safe range flight operations, the RCO has authority to:

- Deny aircraft access to the range or any part of the range.
- Direct aircraft to leave the range.
- Assign aircraft altitude, direction, speed, and pattern.
- Control target approach and weapons delivery.
- Close any range facility, target, strafe pit, or target area and deny aircraft use thereof.
- Control or deny ground party access to range impact areas and facilities.

1.5. RCO Duties

1.5.1. Inspect the strafe pits each day and document the results in writing. RCO is not required to perform an inspection of the entire range each day, but whenever discrepancies are noted the RCO should immediately bring them to the attention of the RCO project manager.

Equipment/maintenance discrepancies that affect normal range operations will be reported to the QAE immediately. The RCO project manager shall perform monthly inspections of all

range facilities and conventional target areas. Any problems/discrepancies which cannot be resolved, or that will affect operations for extended periods will be noted on the RCO report/log at the end of the tour of duty and be reported to the QAE.

1.5.2. Maintain radio communications with operational flights, to ensure effective air-to-ground transmissions that do not distract aircrews on final approach to the target except in the interest of safety. Information, scores, and instructions are examples of typical transmissions.

1.5.3. After completion of opening checklist, determine range and pattern to be flown, and coordinate scoring functions.

1.5.4. Confirm flight schedules with range scheduling, as applicable.

1.5.5. Notify flights/using agencies of any range limitations/restrictions, which may inhibit operational missions.

1.5.6. Perform facilities/equipment inspections to ensure operational status of range systems. Particular attention will be directed to daily inspection of strafe impact areas to prevent ricochet hazard. These inspections will be documented and remain on the job site for government review.

1.5.7. Brief entering flights with the range, traffic, altimeter, and any range conditions that might compromise safety or effective mission accomplishment. All flight members will acknowledge the range, traffic, and altimeter. Upon request, the RCO shall provide wind and temperature observations. The flight lead will provide call sign, crew numbers, and type events unless provided earlier by telephone.

1.5.8. Assign holding in accordance with Local Supplements to AFI 13-212.

1.5.9. Except for student syllabus sorties, monitor the MCR 51-50 five second rule for tactical and curvilinear passes and inform aircrews of tracking time during wing's level on final.

1.5.10. Monitor the delivery pattern for any unsafe practice or procedural errors that could lead to a compromise of mission effectiveness or safety.

1.5.11. Direct pilots to leave the pattern when repeated procedural errors have not been corrected. The RCO may direct any pilot to leave the pattern or range whenever he feels the pilot has committed a dangerous act affecting the safety of the pilot or range personnel.

1.5.12. Notify pilots of any fouls or gross errors committed. The RCO shall direct pilots committing two fouls to cease delivery and hold high and dry. The QAE shall be advised immediately of any pilots required to hold high and dry.

1.5.13. Notify aircrews of any known or suspected weapons malfunction, dropped objects, or unusual sightings/events that may affect mission performance or flight safety.

1.5.14. Notify range personnel of mission requirements which may require unusual support/services and/or which may require special safety precautions, such as laser operations.

1.6. The RCO shall not:

1.6.1. Unnecessarily restrict flight operations beyond the extent required to ensure safe and effective operation of the range.

1.6.2. Approve schedule changes without coordination with Host Base Scheduling Office with the following exceptions:

- Directions of Operations Group Commander.
- Add-ons of overflying aircraft, which may utilize unscheduled periods. Host Base Scheduling or Controlling Agency shall be advised and approve any flight add-ons utilizing unscheduled periods.

1.7. RCO Reports

1.7.1. The RCO will complete the following reports and submit them to the contractor administrative office for disposition.

1.7.2. Weapons Delivery Scoring Record

The RCO will ensure form is completed and certify the form by signature.

1.7.3. Range Activity Report

The RCO will ensure the form is completed, with explanations, where required.

1.7.4. Range Officers Report

The RCO will complete the daily report/foul log including special explanatory comments, where appropriate. The contractor shall ensure that each RCO records lasing time, unusual events, occurrences, range discrepancies or corrective actions on the range activity report to provide continuity of information for subsequent RCO shifts and information retrieval. The contractor shall ensure that each RCO reviews the report for range limitations and restrictions prior to assuming RCO duties. The contractor shall ensure that each RCO is aware of all range limitations and restrictions prior to assuming RCO duties.

1.7.5. Weapons Range Activity Report, RCS: ACC/DOR (Q)7301

While the RCO is not directly responsible for the completion of this report, he/she should be prepared to provide assistance if required. The responsibility for the submission of this report may lie with the contractor or government (see Individual Range Annex).

1.7.6. Special Reports

The RCO should be prepared to assist in any special reports which may be requested to improve the total concept of the range mission in support of aircrew training.

1.8. Government Responsibilities

1.8.1. Aircraft will obtain clearance from the RCO before entering range airspace.

1.8.2. While within range airspace, aircraft will maintain radio contact with the RCO and adhere to all instructions issued by the RCO unless said instructions endanger the aircraft.

1.8.3. Ground personnel will obtain clearance from the RCO before entering the range impact areas.

1.8.4. Ground personnel will adhere to all instructions issued by the RCO.

1.8.5. In instances of lost communications, aircraft will follow communication out procedures IAW AFI 13-212 and MCR 55-4, as supplemented.

2. PERSONNEL QUALIFICATIONS

2.1. Experience

2.1.1. Military experience in tactical air delivery or air-to-ground ordnance and munitions, or:

2.1.2. Military or civilian experience in the management, supervision, maintenance, control or scoring of air operations in the military environment of a conventional/ tactical range, or:
(Contractor personnel who are scorers or maintenance personnel that do not meet any of the other experience levels will require a waiver prior to being certified as an RCO).

2.1.3. Military or civilian experience in the management, supervision, or control of air operations in the military environment of an airfield which includes tactical fighter operations.

2.2. Personal Qualities

2.2.1. Must be able to read and write English and understand standard USAF directives and forms.

2.2.2. Must be able to operate UHF, VHF, CB, FM, and telephonic two-way communications equipment.

2.2.3. Must possess working knowledge of range scoring systems, range target systems, and emergency response actions.

2.2.4. Must possess familiarity with the general classes/types of aircraft and ordnance expected to be employed at the range and with the general classes/types of pattern deliveries that may be employed.

2.2.5. Must demonstrate the abilities to assimilate a variety of information in a dynamic environment and react with sound decisions and judgment, while adhering to established practices and procedures.

2.3. Physical Requirements

- Vision correctable to 20/20 and ability to distinguish primary colors.
- Full use of both hands and arms.
- Possess normal hearing.
- Clear English speaking voice.
- Able to climb steps equal to a height of 120 feet.
- Depth perception.

2.4. The contractor shall ensure that all RCOs are physically fit to perform RCO duty.

2.4.1. Each RCO must receive an annual physical examination, which will be maintained in the RCO's record. The contractor will pay for all associated cost. The exam will be completed by 1 October of each year.

2.4.2. Each RCO must receive an initial laser eye examination through the host base eye facility and again prior to the end of the final option year of the contract. The government will provide this service at no expense to the contractor.

2.4.3. The contractor shall ensure that personnel performing duty are not incapacitated by illness, injury, exhaustion, or alcohol or drug use (including prescription and nonprescription medication).

2.4.4. The contractor shall ensure that personnel do not perform RCO duties within 12 hours of consuming alcohol.

2.4.5. The contractor shall ensure that personnel do not perform RCO duty for 12 hours or more at one time. However, personnel may perform non-RCO duties after 12 hours of duty.

2.4.6. The contractor shall ensure RCO qualified personnel have a minimum of 12 hours of uninterrupted off-duty time prior to any duty period in which personnel perform RCO duty.

3. TRAINING REQUIREMENTS

3.1. Qualification Training

3.1.1 The host base OSS/OST will be OPR for all contract range control officers (RCO) training. As soon as contractor personnel are available the training will include but is not limited to:

3.1.2. Academic

The QAE, with weapons and tactics direction, will monitor/evaluate RCO academic training until the contractor has sufficient personnel and expertise to conduct the academic training. As a minimum, academic training will include the following subjects:

- AFI 13-212, Weapons Ranges, as supplemented.
- MCR 51-50, chapter 5, Tactical Fighter Weapons Delivery Qualifications, as supplemented
- Applicable intermediate command regulations and manuals.
- Limits and source of RCO authority and responsibility.

- Weather minimums for each event.
- Communications procedures.
- Aircraft ordnance delivery patterns, day and night, for all aircraft to be flown on the range.
- Foul criteria.
- Capabilities and limitations of range facilities.
- Hazards and pattern safety.
- Range records.
- EOD safety briefing IAW paragraph 3.2.14.1. in Section C-3.

3.1.3. On-range RCO training

A qualified RCO will supervise on-range RCO training. The ROO will supervise on-range RCO training until the contractor has sufficient personnel and expertise to conduct on-range training. The contractor shall develop a checklist to ensure complete and professional training. Emphasis will be placed on the use of good judgment and common sense while controlling aircraft and personnel on the range. Training shall include the following:

- Primary and secondary radio and tape recorder operations.
- Radio transmission procedures.
- Bomb plotting and DA3H operation.
- Lost communications procedures.
- Minimum altitude measuring devices.
- Cease fire estimation for low angle strafe.
- Fire fighting equipment and procedures.
- Crash and rescue procedures.
- Evacuation of injured personnel.
- Tactical range operations.
- Night range operations.
- Aircraft conflict within the range area.
- Range pattern spacing.
- Foul criteria and procedures.
- Range hazards.
- Inspection of strafe impact areas.

3.1.4. Certification (written examination, on-range demonstration, and documentation)

3.1.4.1. The ROO shall write and administer a written, open book examination on the previously cited regulations and topics. Passing score is 85 percent. Critique incorrect answers to 100 percent. The contractor RCO Project Manager will, after being qualified, maintain and administer the RCO Test.

3.1.4.2. On-range demonstration consists of day and night qualification. Day qualification shall be a prerequisite to night qualification.

3.1.4.2.1. Day - Each upgrading RCO shall observe a qualified RCO to demonstrate proper methods and techniques for controlling aircraft during air-to-ground operations. After observing at least four flights conducting range operations, the upgrading RCO shall control at least four

flights under the supervision of the qualified RCO. One of the flights shall be a flight of four aircraft.

3.1.4.2.2. Night - To qualify for night RCO duties, each upgrading RCO shall observe at least two night flights and control at least two night flights under the supervision of a night qualified RCO.

3.1.4.3. Certification shall be documented by the contractor.

3.1.4.4. In the event the contractor cannot provide a qualified RCO to conduct on-range training and qualification, assistance shall be requested from the QAE.

3.1.4.5. Initial RCO qualification training shall be required for RCO designated contractor personnel regardless of prior RCO qualification.

3.1.4.6. To maintain currency, each RCO shall take the written examination annually and perform RCO duty at least once every 30 days. If a RCO becomes non-current due to nonperformance of RCO duties or expiration of written examination, the RCO shall retake the examination and reaccomplish all on-range demonstrations.

3.1.4.7. On range demonstrations will be observed and certified by a fully qualified RCO or wing DOW representative.

3.1.4.8. Recurrency will be documented as shown in attachment 1. RCO currency requirements will not be waived, except in an emergency. Any emergency waiver must be requested and fully justified by the RCO program manager, must be approved for a specific period, not to exceed 24 hours, and must be approved by the Host Base Operation Group Commander prior to individual performing RCO duties.

3.1.4.9. The contractor will conduct recurring/upgrade training of all contractor and USAF qualified personnel, and will conduct training of newly assigned personnel or USAF authorized personnel. Records will be maintained to reflect the training and qualifications of all personnel assigned to perform as RCO and the records will be available for government review as required. The training record (Atch 3) for each individual will include, as a minimum, the following:

- Section 1: Personnel Data.
- Section 2: RCO Certification/Currency.
- Section 3: Academic, on Range, and Demonstration Training.
- Section 4: Evaluations.
- Section 5: Supplemental Data.

4. GOVERNMENT RCOs

4.1. The government reserves the right to use government personnel to perform the RCO function. The provisions of this technical exhibit do not apply to government RCOs.

Attachment 1
RCO QUALIFICATION DOCUMENTATION

QUALIFICATION TRAINING RECORD

NAME: _____

1. Date entered training: _____
2. Date completed training: _____
3. Eye examination: 20/20 Color/ Laser _____
4. EOD Briefing: _____
5. Directives: AFI 13-212 and Local Sup _____
AFI 13-212, AAC Sup 1 _____
AFI 12-212 _____
MCR 55-4, Vol 1, Ch 9 _____
MCR 51-50, Vol 1, Ch 6 _____
6. Academic/On Range/Demonstration Training:
 - a. UHF, VHF, CB, FM, Telephone(s) _____
 - b. Target and Scoring Systems _____
 - c. Aircraft patterns/minimums _____
 - d. Minimum altitude references _____
 - e. Dive angle references _____
 - f. Strafe range (foul) references _____
 - g. Fouls/Foul criteria _____
 - h. Fire control/suppression _____
 - i. Evacuation of injured personnel _____
 - j. Crash/rescue procedures _____
 - k. Aircraft emergencies _____
 - l. Alternate airfields _____
 - m. Lost communications _____
 - n. Emergency jettison/ejection _____
 - o. Weather restrictions/hazards _____
 - p. Ground safety _____
 - q. Local area orientation _____
 - r. Adjacent range operations _____
 - s. ARTC center operations _____
 - t. Checklist _____
 - u. Reports/Records _____
 - v. Helicopter operations _____
7. Written examination completed: _____

A-1

RCO CERTIFICATE FOR _____ RANGE

NAME _____

a. Is qualified and recommended for training as RCO.

(Contractor Signature) (DATE)

b. Has completed RCO academic training and written examination.

(Signature)

c. Has completed initial (or requalification) (day night) on range demonstration.

Day _____ Night _____
(Date) (Date)

RCO _____ RCO _____
Signature Signature

_____ _____
Unit Unit

d. Is authorized to perform RCO duties as indicated:

Day RCO Approved Night RCO Approved

_____ _____
(Date) (Date)

_____ _____
Signature Signature

A-2

RCO EVALUATION

DATE: _____

TIME: _____

DAY/NIGHT

NUMBER FLIGHTS OBSERVED: _____ NUMBER FLIGHTS CONTROLLED: _____

| | SAT | MARG | UNSAT | NOT OBSERVED |
|-----------------------|-------|-------|-------|--------------|
| OPENING PROCEDURES | _____ | _____ | _____ | _____ |
| R/T PROCEDURES | _____ | _____ | _____ | _____ |
| INITIAL CHECK-IN | _____ | _____ | _____ | _____ |
| CONTROL ON-RANGE | _____ | _____ | _____ | _____ |
| PASSING SCORES | _____ | _____ | _____ | _____ |
| SPACING | _____ | _____ | _____ | _____ |
| SITUATIONAL AWARENESS | _____ | _____ | _____ | _____ |
| PROCEDURAL KNOWLEDGE | _____ | _____ | _____ | _____ |
| PIBAL PROCEDURES | _____ | _____ | _____ | _____ |
| CLOSING PROCEDURES | _____ | _____ | _____ | _____ |
| OVERALL EVALUATION | _____ | _____ | _____ | _____ |

COMMENTS: _____

SIGNATURE: _____

OPERATING AGENCY/DOW: _____

APPENDIX 2 to PWS C-5, Chapter 2
TELEVISION ORDNANCE SCORING SYSTEM (TOSS)
(for the Dare County, Melrose and Saylor Creek B&G Ranges)

1. DESCRIPTION AND PURPOSE

The contractor shall provide TOSS operations and maintenance for all applicable PTRs. The scoring system provides measurements of the accuracy of aerial delivered ordnance on a specified target. The target is monitored by two precisely aimed television cameras, controlled by an operator at the control center command console, which may be collocated, or remote. There may be several cameras per PTR location. The cameras are used in pairs to solve the triangulation problem. Each system employs one pair of cameras at a time, aimed at a specific target. The video signal from one tower camera is transmitted via microwave link or fiber optics to another tower camera, where the signals from both cameras are combined and transmitted as split video to the control center. The video is displayed on a monitor TV screen. When an ordnance impact is observed, the control center operator positions a vertical cursor line through the point of impact on the top half of the display. The cursor position is entered into a graphics calculator via the rate stick. The impact position is likewise entered from the lower half of the display screen. The calculator triangulates to arrive at a score expressed in distance and clock position from the target. The split screen display may be recorded for scoring at a later time.

2. SCORING AIDS

Target areas are configured with three types of scoring aids, which can be detected by the TOSS cameras: identifiable targets, calibration markers, and surveyed aiming points (SAP) markers. The location of each of these aids can be determined by referring to the range map prepared during TOSS installation. A brief description of each of the aids is as follows:

2.1. Targets

The full spectrum of visible targets is scorable; each is assigned a target number. Line targets, such as a convoy, and point targets, such as vehicles or aircraft, are assigned numbers. The target numbers are listed in tabular form on the range map along with an X-Y coordinate of each target. The X-Y coordinate can be used to locate the target on the map.

2.2. Calibration Markers

Each camera has three or four calibration markers, which are used to calibrate the camera's zoom lens. The markers are normally located approximately halfway between the camera and target area, arranged in a straight line to the left or right of the center marker. The angle between two adjacent markers is 3 degrees when viewed from the camera.

2.3. Surveyed Aiming Points (SAP)

The SAPs are precisely surveyed points within the target area. A marker or barrel marks each SAP. To achieve desired system scoring accuracy, targets, calibration markers, and SAP markers must be placed directly over the surveyed point. The SAP markers are painted so the left half is black and the right half is white when viewed from the camera. The left edge of the white half is the center of the marker. The vertical cursor is always aligned through the center of the marker to perform a relocation or calibration procedure. Each SAP is assigned a target number

greater than 100. Target numbers are listed in tabular format on the range map along with an X-Y coordinate of each SAP. The X-Y coordinate can be used to locate the SAP on the map.

3. MAJOR COMPONENT LOCATIONS

TV cameras are mounted at strategic locations on the range. The control center, with installed command console, may be collocated on range or remote to other locations.

4. CAMERA SITE EQUIPMENT

Camera sites vary in configuration, however, each site provides for acquisition and transmission of a video signal to the control center. Below is a list of the primary camera equipment for TOSS systems, with a brief description of each:

4.1. Tower

The tower gives the television camera a view of the target area.

4.2. Camera

The television camera monitors the targets.

4.3. Pan and Tilt

The pan and tilt is a positioning device used to aim the camera at the desired target on the range. Two models of the pan and tilt are used in TOSS.

4.4. Video Transmission Device

Either Microwave, Fiber Optics or other means of relaying the video signal from the remote location to the control console. Consists of a transmitter and receiver system, including required antennas or transmission media, to form a communications link.

4.5. System Power Supply

A power production system, battery or AC converter, designed to provide required power to cameras and other remote equipment.

4.6. Command Decoder

The decoder converts signals from the control site into equipment control signals.

4.7. Sunshield

The sunshield helps protect the TV camera from damage by the sun.

5. CONTROL CENTER (SITE) EQUIPMENT

The control center contains all the equipment necessary to control the operations of TOSS. Although configurations vary, each control center utilizes some form of the following equipment listed below, with a brief description of each.

5.1. Passive Video Switcher

The passive video switcher routes the video to and from the television monitors and videocassette recorder.

5.2. Video Distribution

The video distribution amplifier provides multiple video signal outputs from single video input.

5.3. Waveform Monitor

The waveform monitor is a maintenance tool. The monitor displays either annotated or uninitiated video signals.

5.4. 9-Inch Monitor

The 9-inch monitor is a maintenance tool. The monitor displays the video image of the composite video signals on the waveform monitor.

5.5. 14-Inch Monitor

The 14-inch monitor display is used for scoring.

5.6. Videocassette

The videocassette recorder is used to record the video display during ordnance deliveries.

5.7. Audio Amplifier

The audio amplifier permits recording and listening to pilots' and operators' comments on the videocassette recorder.

5.8. Speakers

The output of the audio amplifier is applied to the speakers.

5.9. Scoring Cursor

The scoring cursor annotates the video display with the vertical cursor line and 11-digit display. Two models of the scoring cursor, the 581 and the 581A are used in the TOSS.

5.10. Rate Stick

The rate stick panel controls the horizontal position of the vertical cursor line on the display. The panel also controls the transfer of the cursor position to the graphics calculator. The rate stick is part of the scoring cursor.

5.11. Graphics Calculator

The graphic calculator computes the score for each ordnance delivery.

5.12. Hard Copy Unit

The hard copy unit makes copies of the display on the graphics calculator.

5.13. Input/Output Panel

Signal connections to and from the control console are routed through the input/output panel.